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Abstract
In 2016, the Government of Canada undertook a review of regulatory processes for federal environmental assessments (EAs) in preparation for replacing the Canadian Environmental Assessment Act. An EA Expert Panel was appointed to review numerous oral and written submissions from Indigenous nations, government agencies, and the public. The Panel's final report included recommendations that were considered by Canada in the development of its currently proposed new legislation regarding federal EAs: Bill C-69. The goal of this analysis is to evaluate the extent to which Canada's review and proposed legislation actually addressed the Crown's duty to consult Indigenous nations' knowledge systems. Detailed examination of the Panel's review and Canada's response shows clearly that the Crown's duty has not been fulfilled by the proposed legislation, in either spirit or practice.

Keywords
duty to consult, Indigenous, science, knowledge systems, environmental assessment

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In Canada, most federal environmental assessments (EAs) have been governed by the Canadian Environmental Assessment Act (CEAA) 2012 to “inform government decision-making and support sustainable development by identifying opportunities to avoid, eliminate or reduce potential adverse impacts on the environment and by ensuring that mitigation measures are applied” (Canada, 2016, para. 1). When a majority Liberal government was elected in fall 2015, one of its principal commitments was a thorough review and modernization of CEAA 2012, which had been severely weakened by previous Conservative governments. For example, the Conservatives narrowed the scope to eliminate any federal involvement in the majority of EAs, severely reduced breadth of remaining assessments, and increased role of political lobbying and “ministerial discretion” in final decision making (Gibson, 2012). On November 13, 2015, Prime Minister Justin Trudeau issued a mandate letter to the newly appointed Minister of Environment and Climate Change (hereafter referred to as the Minister), Catherine McKenna, charging her to:

- Immediately review Canada’s environmental assessment processes to regain public trust and help get resources to market and introduce new, fair processes that [would]:
  - Restore robust oversight and thorough environmental assessments of areas under federal jurisdiction, while also working with provinces and territories to avoid duplication;
  - Ensure that decisions are based on science, facts, and evidence [emphasis added], and serve the public’s interest;
  - Provide ways for Canadians to express their views and opportunities for experts to meaningfully participate; and
  - Require project advocates to choose the best technologies available to reduce environmental impacts. (Canada, 2015, paras. 23-27)

The Prime Minister’s charge to the Minister did not include any reference to the Canadian Crown’s duty to consult and accommodate (hereafter referred to as the duty to consult) Indigenous nations and their respective knowledge systems in federal EAs (Newman, 2014b). However, the Prime Minister’s charge also stated that “no relationship is more important to me and to Canada than the one with Indigenous Peoples. It is time for a renewed, nation-to-nation relationship with Indigenous Peoples,  

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1 The term Indigenous rather than Aboriginal is used in this report (with the exception of direct quotations) to refer to the First Nations, Inuit, and Métis peoples in Canada. While the term Aboriginal is significant under the Constitution Act of 1982, not all Indigenous Peoples identify with the term. Readers should be aware that there is no single term to describe all Indigenous Peoples, and every effort should be made to use the name preferred by the specific group being referred to.

2 For this analysis, I adopt the definition of cultural knowledge system provided by Varghese and Crawford (in press): “a social network of individuals, that exhibits structure and function in the use of specific processes to understand the conditions and causal mechanisms of nature” (para. 26).

3 As an anonymous reviewer correctly noted, the phrase “Indigenous nations and their respective knowledge systems” is an atypical, yet essential, expression in this analysis. The Crown’s duty to consult and accommodate Indigenous nations applies in a wide variety of cultural, legal, political, and economic contexts. However, when it comes to federal science-based environmental assessments of a proposed activity, the knowledge system (defined in previous footnote) of the Indigenous nation becomes a focal point for what that nation knows about the predicted effects (conditions and/or causes) of the proposed activity.
based on recognition of rights, respect, co-operation, and partnership” (Canada, 2015, para. 8). Thus, even at the highest levels of organization, Canada’s review of CEAA 2012 was confronted with a dilemma. On the one hand, there was an explicit, a priori commitment by Canada to the science knowledge system in future federal EA regulatory processes. On the other hand, Canada had also explicitly recognized the essential role of Indigenous nations in federal EAs (without any mention of their knowledge systems). It remained to be seen how Canada’s review would reconcile this dilemma, especially in the newly drafted House of Commons of Canada Bill C-69 An Act to enact the Impact Assessment Act and the Canadian Energy Regulator Act, to amend the Navigation Protection Act and to make consequential amendments to other Acts. At the time of submitting this analysis, Bill C-69 had proceeded through three readings and had been passed by the House of Commons on June 20, 2018, and it was headed for debate in the Senate.

The goal of this analysis is to evaluate the extent to which Canada’s 2016-2017 review of federal EA regulatory processes and proposed legislation in Bill C-69 actually addressed the Crown’s duty to consult Indigenous nations’ knowledge systems. In order to achieve this goal, it will be necessary to satisfy the following specific objectives:

a. Review Canadian proclamations, acts, policies, and guidelines regarding the Crown’s duty to consult Indigenous nations’ knowledge systems, especially in regard to EA regulatory processes;

b. Survey Canadian case law for arguments and decisions regarding the Crown’s duty to consult Indigenous nations’ knowledge systems in EA regulatory processes;

c. Search for provisions of existing international treaties and agreements for which Canada is a party, specifically regarding consultation of Indigenous nations’ knowledge systems;

d. Identify aspects of the EA Expert Panel’s mandate, scope, and processes regarding the role of the Crown’s duty to consult Indigenous nations’ knowledge systems in EA regulatory processes;

e. Assess submissions to the Panel regarding the Crown’s duty to consult Indigenous nations’ knowledge systems in EA regulatory processes; and

f. Evaluate the degree to which the Panel and Canada incorporated the Crown’s duty to consult Indigenous nations’ knowledge systems in EA regulatory processes, for incorporation into Canada’s Bill C-69 as a proposed replacement of the Canadian Environmental Assessment Act and associated policies and guidelines.

In this manner, it is hoped that the Government of Canada and its Indigenous and non-Indigenous peoples will have a clearer understanding of how the Crown’s duty to consult Indigenous nations’ knowledge systems can be meaningfully translated into effective provisions of EA law, policies, and guidelines for the future.

**Proclamations, Acts, Policies, and Guidelines**

The Canadian Crown’s duty to consult is a complex idea that emerges from the reconciliation of Crown sovereignty with Indigenous occupation in Canada prior to colonization (Stevenson, 2017; Townshend & McClurg, 2014). There is a long and often difficult history of Crown–Indigenous relationships in Canadian law, policies, and regulations (McFadgen, 2013). In a legal sense, the *honour of the Crown* in dealing with Indigenous nations traces back in time—past recent Supreme Court decisions, past the
Constitution Act of 1867, and even past the Royal Proclamation of 1763, which was itself a critical development in the relationship between Indigenous nations and the colonial government of what was then British North America (Coates & Favel, 2016; Favel & Coates, 2016). Arnot (1996) provided a very interesting commentary on the source of the Crown's duty of honourable dealing, typically abbreviated to the honour of the Crown:

Long before we agreed, as an increasingly ethnically complex and contested nation, on a formal Charter of Rights, we had inherited the British tradition of acting honourably for the sake of the sovereign. This is a very ancient convention with roots in Pre-Norman England, a time when every yeoman swore personal allegiance to his chieftain or king—whether he be Celt or Saxon. Anyone who was charged with speaking or acting on behalf of the King bore an absolute personal responsibility to lend credit to his master's good name. Should he fail in this responsibility or cause embarrassment, he was required to answer personally to the King with his life and fortune. (p. 340)

It is very interesting to juxtapose these ancient English sovereign values with modern interpretations regarding the honour of Canada as a constitutional monarchy. Specifically, to what extent does the individual currently serving as Canada's prime minister—and the people currently serving as associated cabinet ministers in the federal government—bear personal responsibility to ensure that Indigenous nations are treated in a respectful and just manner that the current monarch would personally accept as lending credit to Her good name? See for example Haida Nation v. British Columbia [Minister of Forests] (2004).

While part of the contemporary operationalization of the duty to consult is guided by Canadian law, the actual history of developing and implementing such policies has been decided outside the law by both political and administrative agents in government (Newman, 2015; Nosek, 2017). The common law basis for the duty to consult arises from the Crown's fiduciary obligations toward Indigenous Peoples, manifest via their inherent and treaty rights as outlined in §35(1) of the 1982 Constitution Act, which (a) recognizes and affirms Indigenous rights and titles, and (b) places special emphasis on reconciliation between the parties.

In 1992, the Government of Canada passed the Canadian Environmental Assessment Act with the following stated purposes:

(a) to ensure that projects are considered in a careful and precautionary manner before federal authorities take action in connection with them, in order to ensure that such projects do not cause significant adverse environmental effects;
(b) to encourage responsible authorities to take actions that promote sustainable development and thereby achieve or maintain a healthy environment and a healthy economy;
(b.1) to ensure that responsible authorities carry out their responsibilities in a coordinated manner with a view to eliminating unnecessary duplication in the environmental assessment process;
(b.2) to promote cooperation and coordinated action between federal and provincial governments with respect to environmental assessment processes for projects;
(b.3) to promote communication and cooperation between responsible authorities and Aboriginal peoples with respect to environmental assessment;
(c) to ensure that projects that are to be carried out in Canada or on federal lands do not cause significant adverse environmental effects outside the jurisdictions in which the projects are carried out; and
(d) to ensure that there be opportunities for timely and meaningful public participation throughout the environmental assessment process. (Canada, 1992, §4.1)

In the entire body of the Canadian Environmental Assessment Act, there was only a single mention of potential engagement with Indigenous nations’ knowledge systems in EAs: “Community knowledge and aboriginal traditional knowledge may [emphasis added] be considered in conducting an environmental assessment” (Canada, 1992, §16.1). Thus, based on this wording in the 1992 version of the Act, Canada may or may not consider Indigenous knowledge systems in EAs. At face value, this was effectively equivalent to saying nothing at all on the issue.4

In 1996, the Royal Commission on Aboriginal Peoples investigated the troubled relationship between Canada and Indigenous nations. It provided more than 400 recommendations for substantial legislative and administrative reforms, including meaningful consultation regarding EAs and resource management (McFadgen, 2013; Usher, 2000). In 2011, Canada published a guidance document for federal officials and others regarding what were seen as the Crown’s obligations: Aboriginal Consultation and Accommodation: Updated Guidelines for Federal Officials to Fulfill the Duty to Consult (Canada, 2011). In these guidelines, Canada (2011) made four incidental references to Indigenous knowledge (and no references whatsoever to an Indigenous–science knowledge system interaction):

a. “Determine whether there are any statutes or regulations that require the department or agency to consult with Aboriginal groups in relation to their activities or consider traditional knowledge (such as provisions in the Species at Risk Act, Canada National Parks Act)” (p. 21).

b. “Beyond the duty to consult, there are other reasons for including Aboriginal groups in the environmental assessment process. These include obligations under the Canadian Environmental Assessment Act to consider ‘environmental effects,’ including any change in the environment that affects the current use of lands and resources for traditional purposes by Aboriginal persons (s.2 of the Act). Also, s.16.1 of the Act provides the opportunity to include Aboriginal traditional knowledge in the environmental assessment” (p. 26).

c. “Documents that may alert the Crown to the existence of a claim or contain historical information in support of a claim include[ing] . . . traditional knowledge and use studies prepared by Aboriginal groups for an environmental assessment process” (p. 42).

d. “The following provides a list of capacity areas for which financial support has been provided to Aboriginal groups in the context of consultation and accommodation processes: . . . land use, traditional knowledge and use or targeted resource planning, management and implementation” (p. 49).

The Guideline’s glossary definition of engagement was also ambiguous. “Engagement: Examples of engagement include discussion groups and formal dialogue, sharing knowledge and seeking input on

4 To be fair, some have suggested informally that the term may was used to express the idea that Canada would consider Indigenous knowledge if an Indigenous nation shared it for the EA. If so, the expression in the Act remained incomplete, vague, and inherently problematic.
activities such as policy, legislation, program development or renewal” (Canada, 2011, p. 61). Taken as a whole, Canada's (2011) guidelines on its duty to consult were highly inadequate for anyone interested in the practical engagement of Indigenous and science knowledge systems for EAs or natural resource management.

It should also be noted that when the Guidelines stated, “Also, s.16.1 of the Act provides the opportunity to include Aboriginal traditional knowledge in the environmental assessment” (Canada, 2011, p. 26), they were actually referring to that ineffective statement in the 1992 Canadian Environmental Assessment Act (1992): “Community knowledge and aboriginal traditional knowledge may [emphasis added] be considered in conducting an environmental assessment” (Canada, 1992, §16.1).

To be clear, in 2012 Canada reworded this statement in its revision of the Canadian Environmental Assessment Act: “The environmental assessment of a designated project may [emphasis added] take into account community knowledge and Aboriginal traditional knowledge” (Canada, 2012, §19.3). The reality is that there was no explicit recognition whatsoever of the legislative requirements for the Crown to fulfill its duty to consult Indigenous nations' knowledge systems in federal EAs even though Canada's guidelines said that the Act provides the opportunity to include Aboriginal traditional knowledge.

### Canadian Case Law

This component of the analysis is by no means a legal commentary, but rather an attempt to understand the origin and development of the Crown’s duty to consult Indigenous nations' knowledge systems in federal EAs. However, as Dwight Newman (2014a) succinctly stated: "to come to an understanding of the duty to consult, there is no alternative than to grapple with the case law" (p. 37).

After passing the 1982 Constitution Act into law, Canada did not effectively reconfigure its relationships with Indigenous nations generally, or with regard to its duty to consult specifically. This lack of progress led to a situation where the Supreme Court of Canada was required to rule on a series of pivotal cases, and in the process gradually develop and clarify a doctrine for the Crown’s duty to consult (Glass, 2015; Townshend & McClurg, 2014). In *R v. Sparrow* (1990) and *Delgamuukw v. British Columbia* (1997), the Supreme Court formally recognized and affirmed the Crown's fiduciary duty to consult Indigenous nations, stemming from Section 35(1) of the Constitution Act (Manley-Casimir, 2016; Valverde, 2011). However, it was not until a trilogy of Canadian Supreme Court decisions between 2004 and 2005 that modern, procedural consultation obligations became more clearly defined (McLeod et al., 2015; Newman & Ortega Pineda, 2016; Peach, 2016). These cases include *Haida Nation v. British Columbia [Minister of Forests]* (2004), *Taku River Tlingit First Nation v. British Columbia [Project Assessment Director]* (2004), and *Mikisew Cree First Nation v. Canada [Minister of Canadian Heritage]* (2005). In these cases, the Supreme Court of Canada started to explicitly describe a framework for the Crown’s consultation activities with Indigenous nations (Anaya, 2014; Booth & Skelton, 2011; Coates & Favel, 2016; Newman, 2014b; Ritchie, 2013), including the following requirements:

- The duty to consult rests with the Crown, and is not a responsibility that can be completely delegated to a third party;
• The Crown must initiate (trigger) consultations with Indigenous nations prior to government decisions that could affect their Aboriginal and treaty rights, even if those rights are asserted yet not fully established;
• Consultations must be a meaningful process undertaken in good faith, based on procedural fairness and genuine efforts to achieve reconciliation with the Indigenous nations; and
• The scale (spectrum) of consultation must be determined by the evidence and support for the asserted and established rights and the nature of the contemplated infringement, where cases with stronger claims and a greater adverse impact on the claim would warrant more extensive consultation and accommodation.

Since this trilogy of landmark Supreme Court decisions, numerous cases have progressed through the provincial and territorial judicial systems—many of which hinged in one way or another on the Crown’s duty to consult Indigenous nations and their knowledge systems for EAs and natural resource management.

One general conclusion clearly emerged from this longstanding parade of cases working its way to the Supreme Court of Canada for final decision making: The Crown seems to have been as determined to minimize the breadth and depth of its responsibilities under its duty to consult Indigenous nations’ knowledge systems, as the Indigenous nations themselves have been determined to maximize those responsibilities (Manley-Casimir, 2016; Moore, von der Porten, & Castleden, 2017). It is highly likely that this intense struggle will continue indefinitely until the Crown starts to develop effective solutions with its Indigenous partners in the true sense of fairness and reconciliation.

In 2012, the Honourable Lance Finch (then Chief Justice of British Columbia) wrote an insightful article in which he argued that the honour of the Crown actually requires not only a duty to consult, but also a duty to learn. In the context of his article, Justice Finch was specifically referring to learning from Indigenous legal orders that have histories predating European colonization:

Through all stages of this process, we must retain a sense of humility. For non-Indigenous lawyers, judges, and students, this awareness is not restricted to recognizing simply that there is much we don’t know. It is that we don’t know just how much we don’t know. In principle, we must always admit a measure of uncertainty in our approach, as non-Indigenous practitioners, to another culture’s narratives and laws; the more so in our conclusions. Bearing in mind this last cautionary standard, we as Canadian legal practitioners, the strangers in the landscape, may find ourselves ready to begin. (Finch, 2012, p. 20)

To be clear, Justice Finch did not explicitly associate the Crown’s duty to consult with Indigenous nations’ knowledge systems in EAs. However, if we now take a minute to re-read Justice Finch’s passage and insert EA scientists and EA resource managers at the appropriate locations, we can see how the Crown’s duty to learn about Indigenous knowledge systems starts to take on a very different meaning in federal science-based EAs. The duty to learn directs the motivation to actually disengage from legal battles and to start working on effective solutions in genuine partnership.
International Treaties and Agreements

Over the past 30 years, Canada has endorsed and committed itself to several international agreements that state Indigenous knowledge systems must be respected in resource management decisions affecting Indigenous rights and interests (Coates & Favel, 2016; Croal, 2015; Favel & Coates, 2016; Lightfoot, 2016; Newman, 2014a; Newman, 2014b; Richardson, 2017), including:

- **Report of World Commission on Environment and Development: Our Common Future** (also known as the Brundtland report; United Nations [UN], 1987);
- Convention on Biological Diversity (UN, 1992b);
- **Akwé:Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessments Regarding Developments Proposed to Take Place on, or Which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities** (Secretariat of the Convention on Biological Diversity, 2004);
- Statement on Principles of Forests (UN, 1992c);
- **Agenda 21** (UN, 1992a); and
- **The Future We Want** (also known as the Rio Declaration; UN, 2012).

In 2016, Canada finally issued full support—without its previously issued qualifications—for the UN Declaration of Rights of Indigenous Peoples, a non-legally-binding document that was originally passed by the UN in 2007 (Favel & Coates, 2016; Lightfoot, 2016). Specifically, the Declaration made several powerful statements endorsing states’ duty to consult their Indigenous nations’ knowledge systems in environmental and resource management. Specific articles include:

- Recognizing that respect for indigenous knowledge, cultures and traditional practices contributes to sustainable and equitable development and proper management of the environment. (UN, 2008, p. 2)
- **Article 31.1** Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions. (p. 11)
- **Article 31.2** In conjunction with indigenous peoples, States shall take effective measures to recognize and protect the exercise of these rights. (p. 11)
- **Article 32.1** Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources. (p. 12)
- **Article 32.2** States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources. (p. 12)
• Article 32.3 States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact. (p. 12)

It is this last stipulation that is especially important with regard to how Canada will develop its duty to consult Indigenous nations’ knowledge systems in federal science-based EAs and natural resource management. Canada has formally agreed that Free, Prior, and Informed Consent (FPIC) needs to be secured when Indigenous Peoples are potentially affected by resource development projects on or near their traditional territories (Boutilier, 2017; Coates & Favel, 2016; Damstra, 2015; Imai, 2016; International Association for Impact Assessment [IAIA], 2012; Land, 2016; Miller, 2015). For this article, the principle of informed consent from Indigenous nations is critical. In order to satisfy this principle, it seems logically necessary that the Crown will be required to:

a. Ensure information about all aspects of the project is provided to the Indigenous nation, including the environmental impact evaluations (created by the proponent or the Crown) on the basis of the Crown’s science knowledge system;

b. Ensure sufficient time and opportunity is provided to the Indigenous nation to understand, access, and evaluate the science knowledge received; and

c. Ensure appropriate opportunity and capacity for the Indigenous nation to engage in reciprocal and meaningful engagement between the Indigenous and science knowledge systems for the purpose of effectively communicating the Indigenous nation’s knowledge regarding the predicted effects of the project.

When the Trudeau Government made the explicit decision in 2016 to fully endorse the United Nation’s Declaration of Rights of Indigenous Peoples, it had to know there would be very important implications for the Crown’s duty to consult Indigenous nations’ knowledge systems in federal science-based EAs and resource management decision-making (Favel & Coates, 2016). Canada would now be required to walk the talk in this regard.

**EA Expert Panel’s Mandate, Scope, and Processes**

On August 15, 2016, the Minister established an EA Expert Panel (hereafter referred to as the Panel), with terms of reference to conduct a review of federal EA processes, including explicit reference to inclusion of Indigenous nations:

The Minister is establishing an Expert Panel (the Panel) to conduct a review of environmental assessment processes. The Panel will engage and consult with Canadians, Indigenous people, provinces and territories and key stakeholders to develop recommendations on ways to strengthen and improve federal environmental assessment processes. (Canada, 2016, Context section, para. 6)

The terms of reference for the Panel provided information on the mandate, scope, and process of review. The Panel’s mandate was explicitly stated as follows:

The Panel’s review shall consider the goals and purpose of modern-day environmental assessment and be conducted in a manner that is consistent with these Terms of Reference. The Panel shall prepare a report that sets out:
The Panel’s terms of reference made no mention at all of the Crown’s duty to consult in a reciprocal and meaningful manner with Indigenous nations and their knowledge systems in federal EAs. The Panel’s mandate did, however, restate the Prime Minister’s charge to the Minister, including the culturally biased commitment to “ensure decisions are based on science, facts and evidence” (Canada, 2016, Scope of Review section, Question 2). Although the Panel members were not bound by the Crown’s legal and political positions on the duty to consult, it is important to recognize that the Crown omitted (intentionally or otherwise) this duty as an explicit cornerstone of the Panel’s mission.

It is revealing to note that the Context section of the Panel’s terms explicitly stated that “in carrying out this review, the Minister is to be supported by the Minister of Fisheries, Oceans and the Canadian Coast Guard, the Minister of Natural Resources, the Minister of Indigenous and Northern Affairs and the Minister of Science” (Canada, 2016, Context section, para. 5). This statement is important because the Prime Minister’s original mandate letter to the Minister had explicitly referenced support in the EA review by the Minister of Fisheries and Oceans and the Minister of Natural Resources—but had not referenced support by either the Minister of Indigenous and Northern Affairs or the Minister of Science. Even more curious in the Panel’s terms of reference is the following:

Environmental assessment is one part of a broader regulatory framework. In addition to the Minister’s mandate to review federal environmental assessment processes, other ministers have also been mandated to carry out reviews and propose reforms to matters that intersect with environmental assessment. These include:

- Minister of Fisheries and Oceans and the Canadian Coast Guard—review changes to the Fisheries Act, restore lost protections and incorporate modern safeguards;
- Minister of Natural Resources—modernize the National Energy Board to ensure that its composition reflects regional views and has sufficient expertise in fields such as environmental science, community development and Indigenous traditional knowledge; and
- Minister of Transport—review changes to the Navigable Waters Protection Act, restore lost protections and incorporate modern safeguards. (Canada, 2016, Complementary Mandates section, paras. 1-2)

Note specifically that the Minister of Natural Resources was explicitly charged to “modernize” the National Energy Board to ensure that it had “sufficient expertise” in “Indigenous traditional knowledge.” Why was this explicit condition not also included in the Minister’s mandate or the terms of reference for the EA Expert Panel?

Further along in the Panel’s terms of reference, the Panel’s mandate was described as follows:

Consider the goals and purpose of modern-day environmental assessment and be conducted in a manner that is consistent with these Terms of Reference.
The Panel shall prepare a report that sets out:
- the conclusions, recommendations and rationale for the conclusions and recommendations of the Panel; and
- a summary of the input received and how it was considered, including that from the Multi-Interest Advisory Committee or other experts. (Canada, 2016, Mandate section, paras. 1-3)

The Panel’s specific scope of review stated that:
In carrying out the review, the Panel shall consider the following matters raised in the Minister’s mandate letter and the mandate letter of the Minister of Indigenous and Northern Affairs:
- How to restore robust oversight and thorough environmental assessments of areas under federal jurisdiction, while working with the provinces and territories to avoid duplication?
- How to ensure decisions are based on science, facts and evidence and serve the public’s interest?
- How to provide ways for Canadians to express their views and opportunities for experts to meaningfully participate?
- How to require project advocates to choose the best technologies available to reduce environmental impacts?
- How to ensure that environmental assessment legislation is amended to enhance the consultation, engagement and participatory capacity of Indigenous groups in reviewing and monitoring major resource development projects? (emphasis added) (Canada, 2016, paras. 1-2)

Thus, it can be seen that a priori dominance of the science knowledge system was carried forward from the Minister’s mandate received from the Prime Minister, down to the Panel’s terms of reference. In contrast, there was only a vague requirement to consider “enhancing” the role of Indigenous nations generally— not necessarily their knowledge systems, specifically— in federal science-based EAs.

The Panel’s scope was not finished. It concluded by providing a few very interesting “examples” of issues the Panel needed to consider and reflect in its work:
- how environmental assessment processes are conducted under the Canadian Environmental Assessment Act, 2012, including practices and procedures, such as Indigenous engagement and consultation (emphasis added), public participation, the role of science and Indigenous knowledge (emphasis added), cumulative effects assessment and harmonization and coordination with other orders of government;
- practices and approaches within Canada and internationally;
- relationship between environmental assessment and other elements of the regulatory framework; and
- alignment of various jurisdictional processes. (Canada, 2016, Scope of Review section, para. 4)

To recognize the objectives of the United Nations Declaration on the Rights of Indigenous Peoples, the Panel shall reflect the principles of the Declaration in its recommendations (emphasis added), as appropriate, especially with respect to the manner in which environmental
assessment processes can be used to address potential impacts to potential or established
Aboriginal and treaty rights. (Canada, 2016, Scope of Review section, para. 5)

Thus, even though the Panel’s mandate and scope made no explicit reference to the Crown’s duty to consult Indigenous nations or their knowledge systems in federal science-based EAs, it was obvious that the Minister realized these engagements would be a critical factor in the Panel's review.

One final note should be made specifically regarding the Minister’s appointment of members to the EA Expert Panel that were going to work within the mandate, scope, and processes described above. The Panel’s terms of reference stated: “The Minister will appoint individuals to the Panel that have knowledge or experience relevant to environmental assessment processes” (Canada, 2016, The Panel section, para. 1). While each of the four panel members did in fact possess expertise relevant to Canadian EAs (they were a management consultant, an industry executive, an environmental lawyer, and an Indigenous lawyer), the Minister did not see fit to appoint any panel members with expertise in either Indigenous or science knowledge systems in EA processes. It is difficult to imagine how this selection process could reasonably omit such essential expertise.

Submissions to the EA Expert Panel

The Panel established a highly compressed schedule of three months (October-December 2016, inclusive) during which the Panel conducted a coast-to-coast tour of Canada, receiving oral and written submissions for its consideration in preparation of a final report. A total of 39 in-person sessions with oral presentations were convened across the provinces: 21 open and public sessions, and 18 Indigenous sessions. A survey of the transcripts from these in-person sessions shows that the Crown’s duty to consult was explicitly raised in 14 out of 18 (77.7%) of the Indigenous sessions and in 11 out of 21 (52.3%) of the public sessions. Closer inspection of the transcripts demonstrates a high degree of consistency with concepts raised in the written submissions; therefore, a more detailed analysis is provided here on the latter only.

A total of 580 written submissions were received from Indigenous nations, government agencies, industry and business organizations, as well as a mix of consultants, non-governmental organizations (NGOs) and individuals (Expert Panel, n.d.). Table 1 presents a frequency distribution of these written submissions, showing that the majority of submissions originated from Indigenous nations ($n = 165, 28.4\%$), then individuals ($n = 136, 23.4\%$), and then non-governmental organizations ($n = 98, 16.9\%$). Taken as a whole, there were 46 submissions from Crown agencies (7.9\%), with roughly equal representation among federal, provincial and territorial, and regional and municipal levels of government.

Of the 580 submissions to the Panel, 190 (32.8\%) made explicit reference to the Crown’s duty to consult with Indigenous nations as an essential part of EAs (Table 1). The federal Crown submissions exhibited the highest relative frequency (12/15, 80.0\%) of reference to duty to consult generally, then submissions by Indigenous organizations (105/165, 63.6\%), legal organizations (8/13, 61.5\%), and industry and business (16/48, 33.3\%). This comes as little surprise, given that the duty with regard to the rights and interests of Indigenous nations must be carried by the Crown and that the process emerged within a legal context, typically in response to development proposals raised by industry and businesses.
Table 1. References to Duty to Consult in Submissions to EA Expert Panel

<table>
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<tr>
<td>Total</td>
<td>580</td>
<td>100</td>
<td>190</td>
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</table>

<sup>Note</sup>. *Where the Crown is the state in all its aspects and sub-divisions including federal, provincial and territorial, and under certain circumstances municipal governments (Imai & Stacey, 2014).*
One insightful example of a non-Indigenous submission to the Panel was provided by the Canadian Chamber of Commerce (CCC, 2016), which included a 2016 focus document entitled *Seizing Six Opportunities for More Clarity in the Duty to Consult and Accommodate Process*. In a footnote expanding on the dynamic nature of the duty to consult Indigenous nations in Canada, the CCC (2016) wrote, “as one indication, the foundational Supreme Court of Canada case for the duty to consult and accommodate doctrine, *Haida* . . . has been cited by subsequent courts over 320 times in just over a decade. This means almost three court decisions every month for eleven years” (p. 28). As we have seen above, case law in Canada continues to have a profound effect on how the Crown’s duty to consult Indigenous nations—and their respective knowledge systems—is being conceived and executed.

What does come as a major surprise from the Panel submissions is that while 17 Indigenous organizations made specific reference to the Crown’s duty to consult their Indigenous knowledge systems as part of the EA process, recognition of this requirement was completely absent from any of the Crown or legal, industry, and business submissions (see Table 1). The single largest Indigenous submission to the EA Expert Panel was provided by the Saugeen Ojibway Nation (SON, 2016), including five reports regarding the essential role of Indigenous knowledge systems in Canadian science-based EAs. In the duty to consult component of their knowledge system submission, SON provided the Panel with their analysis of proclamations, acts, policies, guidelines, case law, and international treaties and agreements. On the basis of their analysis, SON provided strategic recommendations to the EA Expert Panel regarding the new legislation, including the need to explicitly and appropriately incorporate a requirement under the Crown’s duty to consult for reciprocal and meaningful consultation with Indigenous nations’ knowledge systems on federal science-based EAs in their traditional territories. There were also 16 other Indigenous written submissions to the Panel that explicitly discussed the Crown’s duty to consult their Indigenous nations’ knowledge systems as part of EA decision making. The duty to include Indigenous knowledge when evaluating seriousness of the potential adverse effects of proposed activities was discussed in written submissions by the British Columbia Métis Federation, Chiefs of Ontario, Ditidaht First Nation, Gitga’at First Nation, Heiltsuk First Nation and Kitasoo/Xai’xais First Nation, Maliseet Nation of New Brunswick, Métis Nation of Ontario, Mikisew Cree First Nation, Mohawks of the Bay of Quinte, Opaskwayak Cree Nation, Six Nations of the Grand River Territory, and Te’remexw Treaty Association. The written submissions of Grand Council Treaty #3, Innu Nation, Mi’gmawe’l Tplu’tagnn Inc., and Wabun Tribal Council added specific reference to Canada’s existing commitment to consider their knowledge systems under UNDRIP and the associated principles of Free, Prior, and Informed Consent (as discussed above). Mi’gmawe’l Tplu’tagnn Inc. also provided additional insights by referring to protocols they had specifically developed to assist the Crown in the fulfilment of its duty to engage with their knowledge system. Taken together, it would be fair to say that these numerous Indigenous written submissions repeatedly and effectively made the case that both the Panel and the Minister were required to recognize the Crown’s duty to consult Indigenous nations’ knowledge systems in Canadian science-based EAs.

**Responses by the EA Expert Panel and Canada**

knowledge systems in Canadian federal EAs, despite referencing the general duty on 36 different occasions in the text. The closest consideration of Indigenous nations’ knowledge systems in the Panel’s report came in Section 2.4.1 “Meaningful Participation-What We Heard” where the Panel wrote:

Further, the principles of UNDRIP—including requirements for free, prior and informed consent of Indigenous Peoples, the requirements of the duty to consult [emphasis added], and the objective of reconciliation—require appropriate participation processes for Indigenous Peoples. (Gélinas et al., 2017, p. 38)

But, how did the Panel take “what they heard” about the Crown’s duty, and explicitly translate it into recommendations for Canada to revise the CEAA?

The only reference to the Crown’s duty to consult Indigenous nations’ knowledge systems in the Panel’s final report appeared in Section 3 “Implementing the Vision,” Subsection 3.1.2 “Envisioning the New Federal Impact Assessment Authority” under the heading “Required Functions and Capacities-Science and Knowledge,” in which the Panel recommended:

[The new federal IA authority—the Impact Assessment Commission] would be in charge of vetting all analyses for adequacy related to the five pillars of sustainability, through the conduct, co-ordination or oversight of studies conducted throughout the assessment. It would be equipped with expertise in western science as well as in Indigenous knowledge and community knowledge. It would validate monitoring and follow-up data and create and maintain a public database of baseline and monitoring data, as well as other data sets, for potential use in future assessments. Because all IA decisions must be evidence-based, the Commission must have a Chief Science Officer to head the Science and Knowledge function. By legislation, this Officer would have the authority and duty [emphasis added] to verify the adequacy of studies used in the assessment, as well as the Impact Statement. As set out in legislation, the Chief Science Officer would be responsible for issuing a certificate of independent validation for each IA. The purpose of these measures is to safeguard the use of the best science in assessment processes. (Gélinas et al., 2017, p. 53)

A close reading of this critical recommendation shows that, while Indigenous knowledge (rather than the Indigenous knowledge systems that generate that knowledge) would likely be somehow involved, the proposed Impact Assessment Commission would not be explicitly required to fulfill the Crown’s duty to consult Indigenous nations’ knowledge systems in federal science-based EAs. In contrast, the Panel’s vision for the proposed IAC explicitly indicates that the science knowledge system would continue to serve in its culturally dominant capacity.

On June 29, 2017, the Government of Canada released its discussion paper, Environmental and Regulatory Reviews: Discussion Paper (Canada, 2017), in response to the Panel’s final report (among other federal initiatives). This discussion paper included a variety of motherhood statements about science knowledge and Indigenous knowledge; however, it completely avoided the Crown’s duty to consult Indigenous nations’ knowledge systems in federal EAs. The specific phrase duty to consult appeared only once in the entire 23-page document—in a banner graphic that vaguely stated “Indigenous participation in reviews driven by Duty to Consult-Cooperation and partnership based on recognition of Indigenous rights throughout processes” (Canada, 2017, p. 15). There was nothing else regarding the Crown’s duty. Interestingly, when the graphic is examined more closely, the statement
“Indigenous participation in reviews driven by Duty to Consult” appears on the left side of the graphic, along with the general statement, “Our current system can be improved” (p. 15).

Canada's Proposed Bill C-69 (2018)

In February 2018 Canada introduced draft legislation to replace CEAA (2012), based in large part on the report and recommendations from its EA Expert Panel (Gélinas et al., 2017) and the associated government discussion paper (Canada, 2017). At the time of submission for the present analysis, House of Commons of Canada Bill C-69 (2018; hereafter referred to as C-69) An Act to enact the Impact Assessment Act and the Canadian Energy Regulator Act, to amend the Navigation Protection Act and to make consequential amendments to other Acts has proceeded through three readings, been passed by the House of Commons on June 20, 2018, and is headed for debate in the Senate. This analysis focuses specifically on Part 1 of C-69 subtitled An Act Respecting a Federal Process for Impact Assessments and the Prevention of Significant Adverse Environmental Effects.

The Crown’s duty to consult was not mentioned explicitly at any point in C-69. There were several instances where the duty of the Crown (identified as “federal authority” in the Bill) was recognized, including the §6(1d) Preamble which stated:

The purposes of this Act are . . . to ensure that designated projects that require the exercise of a power or performance of a duty or function by a federal authority under any Act of Parliament other than this Act to be carried out, are considered in a careful and precautionary manner to avoid adverse effects within federal jurisdiction and adverse direct or incidental effects. (Bill C-69, 2018, p. 9)

Other references to the Crown’s duty were similarly focused on the phrase “exercise of power or performance of duty or function” (Bill C-69, 2018, § 64.3). Given that neither the EA Expert Panel’s final report nor Canada’s discussion paper explicitly recognized the Crown’s duty to consult, perhaps it should come as no surprise that the duty was completely absent from C-69.

In the Preamble of Bill C-69 (2018), there are three key statements relating directly to the Crown’s responsibility to Consult Indigenous nations’ knowledge systems in federal EAs:

- Whereas the Government of Canada recognizes that impact assessments provide an effective means of integrating scientific information and Indigenous knowledge into decision-making processes related to designated projects. (p. 2)
- Whereas the Government of Canada is committed, in the course of exercising its powers and performing its duties and functions in relation to impact, regional and strategic assessments, to ensuring respect for the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the Constitution Act, 1982, and to fostering reconciliation and working in partnership with them. (p. 2)
- Whereas the Government of Canada is committed to implementing the United Nations Declaration on the Rights of Indigenous Peoples. (p. 2)

Overlooking obvious noun mismatch issues between “scientific information and Indigenous knowledge” (see below), it is more important to focus on the critical concepts of (a) effective “integration” of the two knowledge systems (rather than their knowledge per se) in a single decision-making system in a
manner that (b) fulfills the Crown's duty to consult Indigenous nations' knowledge systems, while (c) satisfying the UNDRIP requirement for reciprocal and meaningful exchange between the knowledge systems (i.e., full/prior and informed consent).

We now proceed to the Purposes of C-69 as stated in §6(1), and in particular §6(1j): "The purposes of the Act are . . . (j) to ensure that an impact assessment takes into account scientific information, Indigenous knowledge and community knowledge" (Bill C-69, 2018, p. 10). The phrase “take into account” is key here, since the processes by which these three qualitatively different knowledge systems are taken into account will largely determine the extent to which C-69 actually fulfills the commitments established in the Preamble (see above). This section of the Bill continues by providing important statements regarding the Mandate of Canada, its Ministers and Agents: §6(2):

The Government of Canada, the Minister, the Agency and federal authorities, in the administration of this Act, must exercise their powers in a manner that fosters sustainability, respects the Government’s commitments with respect to the rights of the Indigenous peoples of Canada and applies the precautionary principle. (Bill C-69, 2018, p. 10)

Once again, general reference is made to rights of Indigenous nations without explicitly acknowledging the Crown's duty to consult. But note also how the undefined “precautionary principle” of the science knowledge system is explicitly recognized and adopted as a priori requirement. No such principles of the Indigenous knowledge systems are even recognized, leading to the first clear indication that C-69 still holds the science knowledge system in a culturally dominant role over the Indigenous nations’ knowledge systems. This exhibition of cultural dominance in C-69 continues in §6(3) Application of Principles to Powers:

The Government of Canada, the Minister, the Agency and federal authorities must, in the administration of this Act, exercise their powers in a manner that adheres to the principles of scientific integrity, honesty, objectivity, thoroughness and accuracy. (Bill C-69, 2018, p. 10)

Note the strength of commitment to these (undefined) principles of the science knowledge system, in stark contrast to the complete omission of any such principles from Indigenous knowledge systems. The issue here is not that there are any major objections to the science principles identified as requirements; they appear at face value to be decent candidates. The issue here is the obvious, continued cultural dominance of the Western science knowledge system over Indigenous knowledge systems, which do not even rate recognition, much less explicit consideration. All of this amounts to cultural dominance—despite all the honourable commitments explicitly stated in the Preamble and Purpose of C-69.

Although the Crown's duty to consult was not to be found anywhere in C-69, several components of the Bill did make explicit reference to the need for “consultation,” including §12 Planning Phase; Obligations subheading under Agency’s Obligation-Offer to Consult:

For the purpose of preparing for a possible impact assessment of a designated project, the Agency must offer to consult with any jurisdiction that has powers, duties or functions in relation to an assessment of the environmental effects of the designated project and any Indigenous group that may be affected by the carrying out of the designated project. (Bill C-69, 2018, p. 14)
In this way, C-69 attempts to transform the Crown’s duty to consult into an “offer to consult.” This effectively narrows the scope of conditional consultation to an “Indigenous group that may be affected,” rather than constitutionally protected Indigenous nations in whose traditional territory the designated project would exist—regardless of whether that nation would be considered by Canada to be “affected.”

Given C-69’s highly constrained definition of consultation with an Indigenous Nation, it remains to be seen exactly how the knowledge system of that nation would actually be involved in assessment decision making. In §16(2) Decisions Regarding Impact Assessments within subheading Agency’s Decision under Factors, C-69 identifies the role of a “consulted” Indigenous nation in the Crown’s decision making about whether an EA would even take place to begin with:

> . . . the Agency must decide whether an impact assessment of the designated project is required. In making its decision, the Agency must take into account the following factors: . . . (d) any comments received within the time period specified by the Agency from the public and from any jurisdiction or Indigenous group that is consulted under section 12. (Bill C-69, 2018, p. 16)

Thus, the Crown would be required to “take into account” the “comments” that a “consulted” Indigenous nation provides within the constrained time period. There are obvious problems with the process as described, including (a) lack of explicit recognition of the knowledge provided by the Indigenous knowledge system, (b) lack of requirement for a transparent and accountable process by which the Crown would “take into account” that knowledge, and (c) lack of requirement for reciprocal and meaningful consultation between the Indigenous and science knowledge systems on the predicted effects of the proposed activity.

Similarly, Bill C-69 (2018) §22(1g), under the heading Factors to be Considered and subheading Factors—Impact Assessment, identifies the role of a “consulted” Indigenous nation in the Crown’s final decision making about an impact assessment:

> The impact assessment of a designated project, whether it is conducted by the Agency or a review panel, must take into account the following factors: . . . (g) Indigenous knowledge provided with respect to the designated project. (p. 20)

Here, the Crown would be required to explicitly consider “knowledge” from an Indigenous nation’s knowledge system (in contrast to its “comments,” see above) in its final decision making for the EA. However, the assessment process as described still suffers from the same critical weaknesses: (a) lack of requirement for a transparent and accountable process by which the Crown would “take into account” that knowledge, and (b) lack of requirement for reciprocal and meaningful consultation between the Indigenous and science knowledge systems on the predicted effects of the proposed activity.

Given the inconsistent yet essential role of knowledge from the Indigenous nation's knowledge system in the processes described by C-69, it becomes important to consider if and how the Crown characterizes what it means by knowledge, from the perspective of both the Indigenous and science knowledge systems. Unfortunately, C-69 is highly inconsistent and ambiguous with its language in this regard. The Bill makes no reference whatsoever to the concept of knowledge systems (Indigenous, local, or science) that create the knowledge, thus creating great confusion between whether knowledge is associated with individuals, communities, and/or cultures. In contrast, C-69 makes repeated use of the phrases “Indigenous knowledge” \((n = 24)\) and “community knowledge” \((n = 3)\). Bizarrely, C-69 makes no
reference at all to science knowledge or scientific knowledge, choosing instead to use unclear phrases such as “scientific information” (n = 7) or “scientific information and data” (n = 1). Given this lack of clarity and consistency in knowledge system terminology, perhaps it comes as no surprise that C-69 provides no definitions or explanations for any of these critical terms, except an obviously circular definition in §2 ’Interpretation–Definitions, which states that "Indigenous knowledge means the Indigenous knowledge of the Indigenous peoples of Canada" (Bill C-69, 2018, p. 7). Canada did not see fit to define the counterparts “science knowledge” or “community knowledge.”

Given all of these issues with terminological and conceptual clarity, it still remains to be seen how effectively C-69 describes the processes by which Canada would satisfy its stated requirement to “take into account” any “comments” that a “consulted” Indigenous nation might provide within the constrained time period for an assessment. Unfortunately, C-69 does not provide any specific processes in this regard, nor does it provide any specific obligations for transparency or accountability to fully demonstrate that there has indeed been reciprocal and meaningful engagement between the Indigenous and science knowledge systems for a given assessment.

To be clear, there were some excellent ideas that came from the EA Expert Panel that were incorporated into C-69, not the least of which is the Expert Committee for the Impact Assessment Agency of Canada, as described in §157:

(1) To advise it on issues related to impact assessments and regional and strategic assessments, including scientific, environmental, health, social or economic issues. (2) The Agency may appoint any person with relevant knowledge or experience as a member of the expert committee. The membership of the committee must include at least one Indigenous person. (Bill C-69, 2018, p. 83)

It is difficult to understand why Canada decided to explicitly identify expertise in scientific knowledge systems in this list but failed to explicitly include any expertise in Indigenous knowledge systems in the mandate of the Agency’s Expert Committee. Simply having at least one Indigenous person on the Expert Committee does not eliminate cultural dominance in this regard because, as was the case with the EA Expert Panel, it is quite possible to have an Indigenous expert on the Committee with no great expertise on Indigenous knowledge systems (see membership of Expert Panel above). C-69 seems to try to manage expectations in this regard by creating another separate Indigenous Advisory Committee for the Agency: §158(1): “to advise it with respect to the interests and concerns of the Indigenous peoples of Canada in relation to assessments to be conducted under this Act” (Bill C-69, 2018, p. 83). There was not even mention of “Indigenous knowledge” in the Committee’s poorly defined mandate.

Subsequent sections of C-69 do not provide much additional information on any requirements that would ensure reciprocal and meaningful engagement between the Crown’s science knowledge system and an Indigenous nation’s knowledge system regarding the environmental and ecological effects of a proposed activity. In terms of the two-way reciprocity between these knowledge systems under the concept of Free, Prior, and Informed Consent, there was no mention of any requirements that the Crown ensure its science knowledge system evaluation of predicted effects (scientific hypotheses, methods, evidence, and probabilities of effects) has been disclosed to the Indigenous nation in a manner that Indigenous expert knowledge holders are satisfied they understand (not necessarily agree with). Similarly, there were no requirements in C-69 that the Crown ensure its science expert knowledge
holders are satisfied they understand (not necessarily agree with) the Indigenous nation's knowledge system evaluation of predicted effects (using whatever knowledge processes it has developed and implemented). With regard to the meaningfulness of engagement between the Crown's science knowledge system and the Indigenous Nation's knowledge system, C-69 similarly has no such requirement. This stands in stark contrast to the repeated, explicit requirements in C-69 that the general public must be provided with an opportunity for “meaningful” (yet undefined) participation in decision making as part of the environmental assessment. Strangely, there are no such explicit statements regarding the Crown's requirement of meaningful inclusion of Indigenous nations' knowledge systems in assessment decision making.

Taken together, it should be clear that without satisfaction of these requirements, the Crown cannot claim that it has effectively engaged in reciprocal and meaningful consultation between the knowledge systems. According to C-69, the Impact Assessment Agency of Canada would ultimately be required to produce a report that "must set out how the Agency, in determining the effects that are likely to be caused by the carrying out of the designated project, took into account and used any Indigenous knowledge provided with respect to the designated project" (Bill C-69, 2018, §28(3.1), p. 23). There is nothing in C-69 that requires this final report to actually demonstrate that the Crown's duty to consult an Indigenous nation has been effectively fulfilled through reciprocal and meaningful engagement between the Crown’s science knowledge system and that of the Indigenous nation. In this regard, C-69 is effectively no different than the grossly inadequate standard that was previously adopted by the Canadian Environmental Assessment Act: “The environmental assessment of a designated project may take into account . . . Aboriginal traditional knowledge” (Canada, 2012, §19.3). To be clear, nothing in C-69 precludes the Crown from fulfilling its duty to consult Indigenous nations and their knowledge systems in federal science-based EAs. It just means there is nothing in the new Act that would require fulfillment of the Crown's Duty in this regard.

**Bill C-69 Documentation**

In association with tabling of Bill C-69 in early 2018, the Government of Canada also released a set of 16 public accessory documents that made various statements regarding the Crown's duty to consult Indigenous nations and their associated knowledge systems generally, as well as the role of Indigenous and scientific knowledge systems in the legislative processes specifically described by C-69:

- Bill C-69 (1 document)
- General information (4 documents)
- Guides (3 documents)
- Promotional materials (8 documents)

A detailed search of these documents revealed that the vast majority of references to science and Indigenous knowledge systems reiterated or paraphrased statements made in Bill C-69 and discussed in detail above. However, there were several new and important issues raised by Canada in these C-69 documents.

First, it should be noted that the documents used terminology reflecting a vague and often inconsistent understanding of key concepts related to Indigenous–science knowledge system structure and function. For example, there were many bewildering references to different factors involved in proposed
assessment decision making: "science and data" (Canada, 2018d), "science and knowledge" (Canada, 2018d), "science, knowledge and data" (Canada, 2018j), "science and evidence" (Canada, 2018b, 2018c, 2018j), "information or knowledge" (Canada, 2018f), "scientific information, evidence, community knowledge, and Indigenous traditional knowledge" (Canada, 2018j), and "science, evidence, and Indigenous traditional knowledge" (Canada, 2018a, 2018d). In some cases, a specific cultural knowledge system (e.g., science) was confused with the knowledge created by that knowledge system (e.g., the science on a particular issue). In other cases, Canada failed to recognize important within-knowledge system distinctions between the different units of human understanding, including the established data–information–knowledge–wisdom hierarchy used in Western knowledge systems (Varghese & Crawford, 2018). Clearly, Canada will have to invest significant effort to clearly explain what it means by these knowledge system concepts before its legislation can be used to ensure reciprocal and meaningful engagement between Indigenous and science knowledge systems in federal science-based EAs.

Second, the C-69 documents were equally vague and inconsistent in how they characterized direct engagements that might take place between Indigenous and science knowledge systems in federal EAs. Throughout all associated C-69 documents, Canada referred exclusively to consideration of “Indigenous traditional knowledge,” which of course is necessary, but not sufficient. The duty to consult Indigenous nations and their knowledge systems is not limited to their traditional knowledge (i.e., passed down from previous generations), but also includes the Indigenous nations’ contemporary knowledge. Canada’s highly inappropriate narrow scope could simply be a reflection of its underdeveloped understanding of knowledge system structure and function. Broadening this understanding would enable it to distinguish between the different types of knowledge within Indigenous, local, and science knowledge systems (Varghese & Crawford, 2018).

Keeping this issue in mind, we proceed to what is one of the most frequently made misstatements in the set of C-69 documents: “Under the new legislation, there would be mandatory [emphasis added] consideration of Indigenous traditional knowledge” (Canada 2018d, p. 7). As we have seen above, this statement is imprecise at best (and highly misleading at worst) because Canada’s non-binding “consideration” of Indigenous knowledge in federal science-based EAs would only take place (a) if Canada recognized the traditional territorial rights associated with a given Indigenous Nation, and (b) if Canada extended an “offer to consult” (Bill C-69, 2018, §12) to that Indigenous nation, and (c) if that Indigenous nation considered the knowledge system engagement process offered by Canada to be sufficiently reciprocal and meaningful that it would agree to share its knowledge. Canada actually does refer to the last of these implementation caveats in a few instances with the C-69 documents when it uses the phrase “Indigenous traditional knowledge, if provided” (Canada, 2018d, 2018j); however, the vast majority of instances in the C-69 documents identify no such provision caveats (Canada, 2018b, 2018c, 2018d, 2018e, 2018f, 2018j). These misstatements lead the naive reader to actually believe there actually

5 It is important to acknowledge that the parliamentary committees did in fact identify and correct this overly constrained condition of Indigenous traditional knowledge, which existed throughout the first draft of C-69. It was edited to correctly read “Indigenous knowledge” in the amended third draft that was passed. Or, as the government described it, “Clarify that Indigenous knowledge would be considered and not limited to ‘traditional’ knowledge, but include the evolving knowledge of Indigenous peoples” (Canada, 2018i, Indigenous Knowledge Use and Protection section, para. 2).
will be “mandatory consideration of Indigenous traditional knowledge,” when this could easily be the exception rather than the rule.

The C-69 documents also make many vague and highly inconsistent statements about the characteristics of Indigenous–science knowledge system engagement in federal EAs, none of which are actually specified or required by C-69. In dozens of instances, Canada claims that decisions will be based on “robust [or rigorous] science, evidence and Indigenous traditional knowledge” (Canada, 2018d, p. 11), despite that fact that neither “robust” nor “rigour” appear in C-69, and thus this condition of knowledge systems are not actually required. In fact, Canada provides no operational definitions of what constitutes robust or rigorous knowledge in either Indigenous or science knowledge systems. There is nothing in either C-69 or the supporting documents that explains how Canada would be required to determine the weighted role of an Indigenous nation’s knowledge system and the Crown’s own science knowledge system in federal EA decision making. Depending on which C-69 document you read, Canada will advise that decision making will be "evidence-based" (Canada, 2018g, 2018h), "science-based" (Canada, 2018d, 2018h), "based on robust science, evidence and Indigenous traditional knowledge" (Canada, 2018d, p. 11; see also Canada, 2018h), or "based on robust science and evidence, and the public interest" (Canada, 2018d, p.5). If "science-based" decision making is too extreme or transparent, Canada also states that EA decisions will be "guided by robust science, evidence and Indigenous traditional knowledge" (Canada, 2018d, p. 10; see also Canada, 2018h, 2018f, 2018e), or perhaps "informed by sound science and Indigenous traditional knowledge" (Canada, 2018f, p. 10). Likewise, Canada variously tells us that under C-69, Indigenous traditional knowledge will be "considered alongside science and other evidence" (Canada, 2018d, p.13; see also 2018d, 2018j, 2018f, 2018b, 2018c), or somehow "incorporated" (Canada, 2018h, 2018d) or "integrated" (Canada, 2018f) into a Western culturally dominant form of decision making. This analysis of Canada’s terminology might seem like trivial semantics, especially when you consider that none of these knowledge “considerations” are actually required by C-69. However, the reality is that powerful differences between the concepts within Indigenous and science knowledge systems will actually determine the admissibility, precedence, and weighting of each in Canada’s EA decision making.

Finally, and perhaps most importantly for the purposes of this analysis, the Crown's duty to consult Indigenous nations is almost as absent from the informational documents about C-69 as it was from C-69 itself. The lone exception comes from one of the promotional documents Better Rules for Major Project Reviews to Protect Canada’s Environment and Grow the Economy: Impact Assessment System (Canada, 2018f), which simply states, "Indigenous participation in reviews driven by Duty to Consult" (p. 1). The irony of this lone observation is particularly rich. As discussed above, this truth about the importance of the Crown’s duty to consult necessarily flows from the foundations of the Canadian Constitution, Canadian law, and the nature of Indigenous–Crown relationships in this country. Notwithstanding the complete absence of this driving truth in the Minister’s mandate, scope, and processes for the EA Expert Panel, many of the Indigenous nations’ formal submissions to the Panel still emphasized the Crown’s duty as the principle driver for their required participation in federal science-based EAs. Bizarrely, this requirement was also omitted in the Panel’s Final Report to the Minister Gélinas et al., 2017), ignored in Canada’s discussion paper (Canada, 2017), and completely absent from Bill C-69 (2018) itself. Yet, somehow the Government of Canada still saw fit to restate this driving truth in its promotional materials for C-69—as if the duty was actually addressed in that proposed legislation — which clearly it was not.
Conclusions and Recommendations

Logically, the Canadian Crown’s duty to consult cannot be fulfilled without reciprocal and meaningful engagement between the Crown and the Indigenous nation(s) in question. In a federal science-based EA context, reciprocal and meaningful consultation necessarily requires effective, direct engagement of the Indigenous and science knowledge systems regarding predicted consequences of the proposed activity—not because it is a good idea (which it is) or because it is the right thing to do (which it also is)—but because it is required by the foundations of law in this country (Stevenson, 2017; Udofia, Noble, & Poelzer, 2016). It is clear that Canada failed to explicitly recognize and effectively respond to this requirement in its review of federal science-based EA regulatory processes and the proposed C-69 legislation. The current situation really is as simple as that.

On the basis of this analysis, I offer the following recommendations for redress of this crucial issue:

a. Canada should not pass Bill C-69 into law, as currently drafted.

b. Canada should revise its legislation to incorporate the Crown’s duty to consult in order to ensure reciprocal and meaningful consultation of Indigenous nations’ knowledge systems in federal EAs is an explicit requirement that must be demonstrated to have been fulfilled.

c. Canada should work with expert Indigenous, local, and science knowledge holders to develop a clearly defined and pragmatic framework for fundamental concepts regarding the structure, function, and engagement of these knowledge systems in federal EAs. Once defined, this framework should be included in the legislation as an explicit requirement that must be demonstrated to have been appropriately implemented.

d. Canada should undertake a comprehensive review and removal of implicit and explicit cultural dominance regarding the role of Indigenous, local, and science knowledge systems in all aspects of federal EA decision making.

If the Government of Canada were to accept and fully execute these recommendations, it would save the people of Canada from countless preventable EA conflicts, and allow the country to truly progress toward satisfying its constitutional, national, and international commitments.
References


