A Regulatory and Implementation Framework for the *Impact Assessment Act*

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1. INTRODUCTION

This document recommends a Regulatory and Implementation Framework (the Framework) for the *Impact Assessment Act* (IAA) proposed in Bill C-69 (42nd Parliament, 1st Session).

The Framework first establishes the context for making regulations under the IAA, in terms of federal regulatory policy, as well as the regulation-making authorities and other powers provided for in IAA (Section 1). Sections 2 and 3 discuss and make proposals for, respectively, the two regulations that the federal government has identified in their Forward Regulatory Plan as being necessary to bring the *IAA* into force following Royal Assent: the *Regulations Designating Physical Activities* (Project List Regulations) and the *Information Requirements and Time Management Regulations* (IRTM Regulations).

Section 4 makes proposals with respect to one additional regulation on regional and strategic assessment, making a case for why a stand-alone regulation is equally necessary for fulfilling the purposes of the IAA. Section 5 briefly reviews proposed entries to the schedules to the IAA, and section 6 reviews non-regulatory policies and guidance.

The Framework has been prepared by Stephen Hazell, Anna Johnston, Josh Ginsberg, Karine Peloffy and Hugh Benevides with input from impact assessment law experts from across Canada provided at an Ottawa workshop held on July 18-19, 2018 and in subsequent communications. The Framework is intended to provide a basis for civil society groups to carry out research, education and public outreach in relation to the regulatory regime for federal impact assessment.

2. REGULATORY CONTEXT

The proposed Regulatory and Implementation Framework has been developed with a view to achieving consistency with federal regulatory policy. A key foundation of the federal regime for regulation making is the *Cabinet Directive on Regulation* (CD-R). The CD-R requires departments and agencies to give notice to stakeholders of upcoming regulatory changes by publishing annually a Forward Regulatory Plan (FRP).

Four planned regulations are listed in the CEA Agency's Forward Regulatory Plan for 2018-2020, including revisions to the *Regulations Designating Physical Activities* (the Project List Regulations), the *Information Requirements and Time Management Regulations* (IRTM Regulations) (replacing the existing *Prescribed Information for the Description of a Designated Project Regulations*), the *Cost Recovery Regulations* (revising the existing regulations made under *CEAA 2012*) and the *Indigenous Cooperation Regulations.* This Framework addresses the Project List Regulations and the IRTM Regulations, but also proposes a Regional/Strategic Assessment Regulation, which is not included in the CEA Agency's Forward Regulatory Plan.

The *Guide to the Federal Regulatory Development Process,* issued by the Treasury Board Secretariat, is another foundational document that outlines the many steps in making a regulation. This guide applies directly only to Governor in Council regulations, such as the Project List Regulations, and not to Ministerial regulations, such as the IRTM Regulations.

This Framework acknowledges that a Ministerial regulation will not necessarily require significantly fewer steps than a Governor in Council regulation, with one notable difference. As a Governor in Council regulation, the Project List Regulations would be submitted to Treasury Board (a Cabinet committee) for approval while the IRTM Regulations would be approved by the Minister alone. Consequently, the process for developing the IRTM Regulations may be shorter than that for the Project List Regulations. Even more importantly, there may be less opportunity for internal resistance to the content of the IRTM Regulations by other ministers and central agencies.

The *Impact Assessment Act* includes regulation-making powers granted to the Governor in Council and Minister of Environment and Climate Change (the Minister) under the IAA. The IAA also outlines non-regulatory powers provided to the Minister as well as the Impact Assessment Agency (Agency). These powers are described in Appendix A.

For the purposes of this Framework, the key Governor in Council regulation-making powers are the creation of the Project List Regulation (which allows the Governor in Council to designate projects and to exempt classes of proponents and classes of projects) and the residual power to enact regulations to carry out the purposes and provisions of the IAA.

3. PROJECT LIST REGULATIONS

The Project List Regulations will be the predominant reference for determining whether the *Impact Assessment Act* is to be applied to any given proposed project. Proposed projects that fall within project types designated in the Project List Regulations will be required to be assessed under the IAA, unless the Agency determines that an assessment is not required under section 16(1). Those that do not fall within any of these project types will not be required to be assessed unless the Minister decides otherwise pursuant to her discretionary authority under section 9(1).

This section proposes an approach for developing the Project List Regulations. A draft Project List is included as Appendix B.

A. Regulation-making Authority

As noted above, Section 109 of the IAA provides authority to the Governor in Council to "make regulations... (b) for the purpose of the definition of *designated project* in section 2, designating a physical activity or class of physical activities." Section 2 of the IAA defines a designated project as "one or more physical activities that (a) are carried out in Canada or on federal lands; and (b) are designated under regulations made under paragraph 109(b) or designated in an order made by the Minister under subsection 9(1). It includes any physical activity that is incidental to those physical activities."

This authority to designate projects is broad, limited only by the condition they be physical activities (as opposed to intellectual or mental activities) that are carried out in Canada or on federal lands.

B. Potential for Effects in Areas of Federal Interest Relating to the Environment

Projects that will be subject to the IAA should have potential for effects on one or more areas of federal interest related to the environment. This Framework argues that "federal interest" should be the test, rather than "federal jurisdiction."

The use of the term "federal jurisdiction" may be interpreted as a limitation on the designation of project types, and would thereby be an invitation to confusion. As defined in Bill C-69, the term "jurisdiction" refers to a government authority, agency or body. However, "jurisdiction" may also refer to an area of federal legislative authority under the *Constitution Act.* If used in the sense of federal legislative authority, the term "federal jurisdiction" is liable to be used narrowly to refer to specific heads of power under the *Constitution Act* such as "Sea Coast and Inland Fisheries."

For example, greenhouse gas emissions and climate change is not a federal head of power under the *Constitution Act*; nonetheless, greenhouse gas emissions and climate change are a critical matter of federal interest. Greenhouse gas emissions have been an important matter of federal interest for successive federal governments as far back as the Conservative government of Brian Mulroney, which signed and ratified the *United Nations Framework Convention on Climate Change* on behalf of Canada in 1992. Therefore, project types to be listed should have potential for effects on one or more areas of federal *interest* related to the environment. Such areas of federal interest will, by necessity, be linked to some recognized area of federal power or authority without being constrained by a narrow construction of federal jurisdiction.

Note that the 2017 *Report of the Expert Panel for the Review of Environmental Assessment Processes* supported this approach, declaring that "Federal IAs should only be conducted on a project, plan or policy that has clear links to matters of federal interest." The Report indicated that these federal interests include, at a minimum:

- federal lands, federal funding and federal government as proponent;
- species at risk;
- fish;
- marine plants;
- migratory birds;
- Indigenous Peoples and lands;
- greenhouse gas emissions of national significance;
- watershed or air shed effects crossing provincial or national boundaries;
- navigation and shipping;
- aeronautics;
- activities crossing provincial or national boundaries and works related to those activities; and
- activities related to nuclear energy.

C. No Defined Limit on the Number of Projects to be assessed under IAA

This Framework starts from the position – as did the 1995 *Canadian Environmental Assessment Act* – that before decisions are made, the government should have good information about the potential adverse impacts on the natural environment and sustainability of categories of projects over which it has decision-making responsibility. It follows, therefore, that the design of the Project List Regulations, including the thresholds for project types, would not be dictated by any interests in minimizing the number of federal assessments to be carried out in any given year.

Of course, not all assessments of proposed projects with potential effects in one or more areas of federal interest related to the environment should be subject to a legislated assessment requirement by inclusion in the Project List Regulations.[1] Other federal regimes (e.g., *Federal Sustainable Development Act, Auditor General Act* – which requires federal departments to prepare sustainable development plans) may be adequate to ensure environmental protection and contributions to sustainability from projects with minor or limited adverse environmental effects. It is for the government to demonstrate that these other regimes will provide good information on environmental and sustainability effects, as well as impacts on Indigenous peoples' rights and authority, and lead to sound decisions that advance reconciliation.

1 Inclusion of a project category on the Project List Regulations does not necessarily mean that any given proposed project in that category would be assessed under the IAA - the Agency must decide whether an impact assessment of the designated project is required: 16(1) After posting a copy of the notice on the Internet site under subsection 15(3), the Agency must decide whether an impact assessment of the designated project is required.

It is also clear that the exceedingly narrow application of *CEAA 2012* has meant that numerous federal decisions have been made concerning important projects likely to have significant adverse environmental or sustainability impacts in areas of federal interest without good information about these impacts. Even worse, numerous projects with the potential for significant adverse impacts in areas of federal interest are proceeding without any federal assessment whatsoever.

One recent example is the cement plant proposed by Colacem Canada Inc. in eastern Ontario (70 km upwind from Montreal) that will produce roughly one megatonne of greenhouse gas (GHG) emissions annually, as well as substantial sulphur dioxide, nitrogen oxides and particulate emissions.[2] No federal or provincial assessment has been carried out, nor are any planned. In this case, it is difficult for the federal or Ontario government to determine if best available technologies (BAT) are being employed to limit emissions. The seriousness of federal intent to reduce Canada's GHG emissions to meet our international obligations is questionable where a project that will produce one megatonne of GHG emissions does not merit federal assessment.

Clearly, impact assessment laws include certain types of projects for assessment and exclude others, which may or may not still be examined under other, usually less rigorous, regimes. For excluded projects, two key questions must be answered: how does the government propose to address cumulative impacts as they aggregate; and what other regimes or approaches will address adverse impacts?

D. Transparency in Developing the Project List Regulations

Identification of proposed project types and other triggers in the Project List Regulations should be done in collaboration with Indigenous peoples, and the participation of the public, as well as scientific and technical experts. Authors of the Framework wish to acknowledge the public consultation efforts on the new Project List Regulations initiated by the Canadian Environmental Assessment Agency in February 2018 (which are ongoing).

The process for establishing project types should:

- be transparent and provide for meaningful public participation;
- be open to evidence-based proposals from proponents, other jurisdictions, organizations and members of the public, as well as from within government;
- be made in consultation and collaboration with Indigenous authorities and rights-holders;
- apply explicit criteria for identifying the potential of the project, individually or cumulatively, to result in effects of concern within federal jurisdiction, impact on Indigenous rights, or hinder Canada's ability to achieve its environmental obligations and climate change commitments; and
- require public reasons for decisions, based on the criteria.

An effective, robust criteria-based and evidence-based approach to developing the Project List Regulation requires scientific, engineering, local and Indigenous community input for most – if not all – project categories.

The authors recommend strongly that the Agency and Minister publicly share any experience, supporting research and analysis they may have relating to possible thresholds, other means of describing projects or triggering assessments, and project effects so that consultation processes may be as well informed as possible.

Finally, the Project List Regulations should be reviewed regularly for any necessary amendments. Given the likely pace of change and the needed pace of learning, a three-year review is recommended.

2 Golder Associates, "Air Quality Environmental Compliance Approval Cumulative Effects Study" Report Number: 1529718 submitted to Colacem Canada Inc. (August 2017).

E. Factors or Criteria for Listing Project Types in the Project List Regulations

Identifying key factors for determining the potential nature of effects is an acceptable starting point to designation of project types to the Project List Regulation. The *Consultation Paper on Approach to Revising the Project List* proposed the following five key factors:

- magnitude,
- geographic extent,
- timing,
- frequency, and
- duration.

These factors alone are not sufficient to capture all projects and activities with the potential for unacceptable individual or cumulative effects on areas of federal jurisdiction. Moreover, projects falling within a given project type could score very differently for some of the factors. For example, large hydroelectric projects such as the "Site C – Clean Energy Project" dam in British Columbia or "Muskrat Falls Generating Facility" in Newfoundland and Labrador surely result in adverse effects of far greater magnitude, geographic extent and duration than a run-of-the-river hydroelectric facility in a local creek.

Also, while the federal government has some experience with the range of effects that could be observed for some project types, it has limited experience with many other project types. For instance, the federal government's experience does not extend to project types that are new since 1995 (e.g., oil and gas fracking projects). Thresholds for different project types can be employed to limit the entry on the Project List Regulations to those projects likely to have more significant adverse effects, but the need to do this for many project types points to the insufficiency of the proposed five-factor analysis.

This Framework proposes other factors that should be employed as part of the analysis for determining whether a project type should be designated; the table below outlines these factors and corresponding descriptions.

FACTOR	DESCRIPTION OF CONSIDERATION
Scale of Project	Production capacity as a proxy for environmental, social and cultural effects.
Location with Respect to Ecological Context	Consider whether a proposed project type is located in a protected area, an area of ecological importance or concern or a climate-vulnerable area. Examples of important ecological and protected areas include National Parks, National Wildlife Areas, National Marine Conservation Areas, Marine Protected Areas, Migratory Bird Sanctuaries, Important Bird and Biodiversity Areas, Wetlands of International Importance (RAMSAR sites) and Key Biodiversity Areas (currently being identified in Canada). Other areas of ecological importance may be identified by considering sensitivity of region to environmental impacts, intactness of ecosystem and habitat, importance for habitat connectivity, climate refugia, and access for hunting and fishing. Climate-vulnerable areas include but are not limited to coastal areas below or near sea-level and flood plains.
Contribution to International Commitments	Consider whether a project type would be consistent with Canada's international commitments. Examples: • Is the project consistent with decarbonizing Canadian society as agreed to via the Paris Agreement? • Would the project deter fulfillment of commitments made under the Convention on Biological Diversity such as the Aichi Biodiversity Targets? • Does the project involve the production, use or transfer of hazardous waste and is it consistent with Canada's implementation of the Basel Convention on Transboundary Movements of Hazardous Waste?
New Project Type	The current Project List under *CEAA 2012* is based on, and differs little from, the Comprehensive Study List developed for *CEAA 1995*. However, many new categories of projects where particular instances could potentially impact in areas of federal interest have become important in the intervening 23 years. Examples include projects with high carbon emissions, in situ oil sands projects, oil sands railway infrastructure, Liquefied Natural Gas marine terminals, oil and natural gas fracking projects and space ports. Such new project types should be designated for the reason that their environmental and sustainability effects are not as well-understood as for projects that have been subject to assessments for decades.
Potential contribution to cumulative effects	This factor would apply to projects with the potential to contribute to cumulative environmental, human health or cultural impacts. Projects likely add to existing stresses and/or induce other developments or include future expansions that could contribute to long-term sustainability effects. This would include construction of multiple "small" or "short" projects that are intended to be linked, interacting, or overlapping later on, which contribute to cumulative impacts on a region. Projects with the potential to induce adverse environmental or sustainability effects, including by encouraging other projects with adverse environmental/sustainability effects, or to open a region to further natural resource or industrial development, merit special attention. For example, roads and transmission lines into undeveloped areas, often built for the purposes of enabling additional development; should be designated under the Project List Regulations.

Contribution to Sustainability	Projects that encourage continued reliance on an unsustainable industry or activity, or have effects that contribute to unsustainable conditions or trends, including consideration of project lifecycle and lifespan.
Potential for Catastrophic Incidents	Potential for catastrophic accidents or malfunctions, etc. For example, projects involving nuclear energy have the potential for catastrophic incidents and thus should be subject to an IAA.
Potential for Adverse Human Health Impacts	Must consider cumulative health impacts of all industry and other activities in an area and the potential for the proposed project type to contribute to and intensify these cumulative impacts.
Potential for Impact on Area of Heritage and/or Cultural Significance	Consider whether the proposed project type would have adverse impacts on UNESCO World Heritage sites, Indigenous sacred sites, etc.
Potential Impact on Indigenous Interests	Projects that would have significant adverse impacts on Indigenous community/ peoples/nations' ability to exercise their inherent, constitutional or international rights. Must consider whether a project is consistent with the goal of reconciliation with Indigenous peoples.
Level of Public Interest	Public interest in a project communicated by individuals or representative organizations/associations; perhaps via petitions and letters previously submitted.
Area of Federal Priority	Addressing environmental issues that are of Canada-wide concern is primarily the responsibility of the federal government. As such, whether a project type will impact on a federal environmental priority should be a factor to consider when determining whether a project should be listed. Four long-standing environmental priorities are: 1. climate change; 2. biodiversity conservation 3. reducing toxics and smog pollution; and 4. protection of water supplies; The current government made additional environmental priorities clear through mandate letters to Ministers of Cabinet, including the Minister of Environment and Climate Change, Minister of Fisheries and Oceans, Minister of Natural Resources, and Minister of Transport. These additional priorities may also warrant inclusion on the Project List.

F. Different Approaches to Designating Projects

Determining which types of projects and activities will be subject to the IAA should depend on evidence-based environmental criteria to the extent possible. Experience to date and consideration of environmental objectives and standards are important elements to consider in making listing decisions, which include describing project categories, their thresholds (if they can be discerned), and additional triggers.

i. Law-List Type Entries

A starting point is to build on the work of federal departments such as Fisheries and Oceans, Transport Canada, and Environment and Climate Change Canada with respect to regulatory regimes that they administer. Proposed amendments to the *Fisheries Act* (Bill C-68) and the *Canadian Navigable Waters Act* (Bill C-69) identify major works that require permits under the provisions of these statutes in order to protect fish habitat and major navigable waters. Given that these amendments focus on projects with significant potential to damage fish habitat and obstruct navigable waters, it is reasonable to assume that such projects are highly likely to have potential for adverse environmental effects in areas of federal interest. Therefore, this Framework proposes that a small number of key regulatory provisions under federal statutes be used to identify projects for designation on the Project List Regulations. These "Law List-Type" provisions are included in Appendix B – Section A.

ii. Entries Based on Federal Funding

Projects funded with significant federal funds (a threshold of $10 million is recommended) also can be expected to have potential for adverse environmental effects. This recommendation is reflected in Appendix B – Section A.

iii Entries Based on Environmental Effect in Area of Federal Interest

A third type of Project List Regulation entry should be physical activities based directly on an environmental effect in an area of federal interest. The government should make use of the IAA and the Project List Regulations to advance its stated environmental priorities. In addition to listing "designated federal environmental priorities" as factors to consider when determining whether to include a project on the Project List, as recommended above, the Project List Regulations should include triggers for when a project will impact on a designated federal environmental priority. A quantitative metric could be specified as a threshold for a designated federal environmental priority, where this is appropriate given the nature of the priority.

This approach would be particularly useful in addressing the priority of climate change. Given that climate change truly is the defining issue for humankind in the 21st century, the federal government should have such authority to require impact assessment of a proposed development project with significant greenhouse gas emissions. Further discussion of climate change in the context of the Project List Regulations is provided below.

Projects that propose to emit significant greenhouse gas emissions is one project type that will be relatively easy to identify from the initial project description. This recommendation is reflected in Appendix B – Section A.

iv. Entries Based on Location in Ecologically Significant Federal Lands

Projects to be located in national parks and national wildlife areas also have potential for environmental effects in an area with clear federal interest or jurisdiction. Several project types in these categories are also identified in Appendix B – Section A.

v. Entries Based on the Characterization of a Project's Purpose

For many projects, a proxy such as a physical descriptor of the project (e.g., length of a rail line or road, production capacity of a mine) may be needed in lieu of an ecological threshold describing the amount of pollutants to be released or habitat to be damaged. One reason for this is that project proponents are obliged to determine and provide accurate information on production capacity early on, to establish the financial and economic viability of the project. Information about pollution to be released and habitat to be damaged is often be more difficult to gather and more difficult to verify. An exception is greenhouse gas emissions, the accurate determination of which is increasingly important for proponents and investors. Thus, this Framework proposes a number of Project List Regulation entries in Appendix B – Section A, based on such proxy measures such as production capacity.

G. Climate Change and the Project List Regulations

i. Climate Factors

The IAA can be an important tool for helping ensure compliance with the *Paris Agreement,* but only if projects and activities with implications for our greenhouse gas reductions goals are subject to assessment under the IAA. Thus, the Project List Regulations should include all projects that individually or cumulatively could have a substantial effect on Canada's ability to achieve its climate change mitigation commitments.

The Project List Regulations should include all physical activities that are on their face inconsistent with efforts to achieve GHG-neutrality, including by damaging carbon sinks. While some projects with significant short-term GHG emissions may be compatible with a transition to GHG neutrality, other projects whose direct GHG emissions are small may nevertheless put us on a track that is incompatible with decarbonization. Factors to consider in listing projects based on their climate implications should include:

- The potential for GHG emissions or impairments to carbon sinks in managed and unmanaged lands alike beyond an established or reasonably anticipated deadline for GHG neutrality in Canada (e.g., by 2040)[3] or in a particular sector or region;
- The potential to contribute cumulatively to GHG emissions or sink impairments which, when combined, would make meeting GHG-reduction commitments (including for a sector or region) more difficult;
- The potential to contribute to or further entrench dependency on fossil fuels, or activities that impair carbon sinks;
- Whether the project belongs to a sector that will likely require significant transformation to ensure consistency with climate mitigation commitments;
- Whether the project is inconsistent with steps required to meet Canada's climate mitigation commitments or remain within a defensible Canadian carbon budget; and
- The potential to contribute to a significant share of Canada's Nationally Determined Contribution, or other domestic or international GHG-reduction commitments, plans or policies.

The Project List Regulations should include projects from each of the key sectors involved in the transition to GHG emission neutrality, including electricity, resource extraction, transportation, manufacturing, forestry, and agriculture. Projects should be listed unless they are demonstrated to be consistent with the transition without the need for an assessment.

To the degree possible, climate triggers and projects should be described on the Project List in such a way that makes it easy to determine whether projects are subject to the IAA from the earliest stages of project conception and development.

3 2050 appears to be the earliest technically feasible deadline for decarbonization for Canada identified so far. Jacobson et al., "100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World", Joule 1, 108–121 September 6, 2017 Elsevier Inc., online: <https://web.stanford.edu/group/efmh/jacobson/Articles/I/CountriesWWS.pdf>. However, this will still result in cumulative emissions much beyond what would be considered to be a 'fair share' carbon budget under the Paris Agreement. See Robert Gibson et al. "From Paris to projects: Clarifying the implications of Canada's climate change mitigation commitments for the planning and assessment of projects and strategic undertakings" Part 4 (publication forthcoming) Part 2.

The Project List Regulations should also include existing undertakings that meet the above criteria and are up for re-permitting, in order to treat incumbents and new projects equitably.

a) GHG Thresholds

Annual emissions thresholds should not be exclusively relied upon as a climate-based trigger for federal assessments, since thresholds do not provide an accurate measure of climate significance and may incite project splitting and other threshold-avoiding behaviours. However, emissions thresholds are easily understandable and make designated projects easy to identify, so should be utilized in the Project List Regulations.

The lifespan of a project should be a key consideration in the description of the project type. Thus, annual quantitative thresholds should decline over time:

Construction or expansion of a facility whose operations are expected to release more than:

i. 50,000 tonnes of greenhouse gas (GHG) emissions per year during the period prior to 2030;

ii. 25,000 tonnes of GHG emissions per year during the period from 2030 to 2040; or

iii. 5,000 tonnes of GHG emissions per year during the period after 2040.

While focusing on direct emissions is simpler for proponents and is likely the practical basis for a quantitative threshold, focusing on induced or indirect emissions should also be relied upon to the degree possible based on the information known at the time of the initial project description to ensure capturing climate-significant projects and avoid project splitting in order to avoid review.

Further, Canada has identified Black Carbon, Methane, Hydrofluorocarbons (HFCs) and Tropospheric Ozone as short-lived climate pollutants (SLCPs) requiring "fast concurrent actions" in order to remain on a pathway consistent with the Paris Agreement temperature goal.[4] Moreover, the reduction of SLCPs "has considerable benefits beyond those that are climate related, such as improving air quality, human health, and environmental and ecosystem outcomes."[5] Therefore, specific thresholds should also be developed to target SLCPs in order to avoid short-term rapid warming and not rely solely on a CO2 equivalent threshold.

b) Projects that Damage Carbon Sinks or Occur in Climate-Vulnerable Locations

As mentioned above, the Project List Regulations should include projects that are likely to adversely affect carbon sinks and reservoirs such as peatlands, other wetlands, old-growth forests, unmanaged forests, and native grasslands. Projects located in climate-vulnerable locations (e.g., coastal areas below or near sea-level, floodplains) should also be listed. The upcoming Strategic Assessment on Climate Change could assist in identifying and delineating carbon sinks and climate-vulnerable locations, as well as projects likely to imperil adaptation efforts.

4 *Canada's Mid-Century Long-Term Low-Greenhouse Gas Development Strategy,* Environment and Climate Change Canada (2016), p. 8, online: <http://unfccc.int/files/focus/long-term_strategies/application/pdf/canadas_mid-century_long-term_strategy.pdf>.

5 *Canada's Mid-Century Long-Term Low-Greenhouse Gas Development Strategy,* Environment and Climate Change Canada (2016), p. 51, online: <http://unfccc.int/files/focus/long-term_strategies/application/pdf/canadas_mid-century_long-term_strategy.pdf>

c) No Exemptions based on Emissions Caps, Technologies or Practices

The *Consultation Paper on the Approach to Revising the Project List* and the discussion paper *Developing a Strategic Assessment of Climate Change* both suggest that projects may be exempted from assessment if certain conditions are present, such as where a province has instituted a cap on greenhouse gas emissions or a project has adopted best available technology (BAT). This approach is entirely unjustifiable given the new statutory requirement to uphold climate commitments[6].

First, there is no guarantee that provincial caps are aligned with Canada's climate commitments under the Paris Agreement. Quite the opposite, as it stands existing provincial cap on GHG emissions, where they exist, are not enough to research our Paris Commitments. Approving new projects based on existing provincial caps would miss the opportunity and necessity to bridge the ambition gap that was so clearly acknowledged in the Paris Agreement.

Second, there is no guarantee that caps will effectively be maintained or respected. Quite the contrary, the recent collaborative report from auditors general showed only two provinces are on track to meet their targets.[7] Changes in provincial governments can lead to cancellation of climate policies, as showcased by the recent Ontario election and the uncertain fate of its cap and trade regime.

Third, there is no guarantee that the GHGs associated with a project are aligned with a provincial cap, especially if the province does not have a specific mechanism to ensure such compliance within its project assessment framework such as a rigorous climate test, which none of the provinces currently have.[8]

Fourth, it is necessary for the federal government to develop minimum standards and methodologies concerning GHG attribution and assessment as such approaches are non-existent throughout the country and ignore many significant sources of emissions, such as GHGs associated with land use change and carbon sink effects.

Likewise, a project's use of BAT is no guarantee that such technologies lead to outcomes consistent with meeting our commitments under the Paris Agreement. Only a prior consistency with decarbonization efforts demonstrated through a rigorous strategic impact assessment could be considered as a potentially defensible approach to exempting projects from federal assessment.

6 House of Commons of Canada, Impact Assessment Act, part 1 of Bill C-69 as passed by the House of Commons and introduced in the Senate, 20 June 2018, s. 63(e); Canadian Energy Regulator Act, part 2 of Bill C-69, as passed by the House of Commons and introduced in the Senate, 20 June 2018, ss. 183(2)(j), 262(2)(f), and 298(3)(f), online: https://www.parl.ca/LegisInfo/BillDetails.aspx?billId=9630600&Language=E

7 Perspectives on Climate Change Action in Canada—A Collaborative Report from Auditors General—March 2018, http://www.oag-bvg.gc.ca/internet/English/parl_otp_201803_e_42883.html

8 So far, only Quebec tentatively attempted to include a weak version of a climate test in its regulatory framework, but the proposed regulation has not been adopted and is going back to the drafting board. Environmental Quality Act Draft Regulation, Gazette officielle du Québec,, February 14, 2018, Vol. 150, No. 7 <http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=1&file=103309.pdf> (not adopted); Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques. (2018). *Modernisation du régime d'autorisation environnementale: La ministre Melançon annonce la mise sur pied de tables de cocréation sectorielles pour les règlements d'application de la LQE.* Online: http://www.mddelcc.gouv.qc.ca/infuseur/communique.asp?no=4049.

4. INFORMATION REQUIREMENTS AND TIME MANAGEMENT REGULATIONS

A. Background

The proposed *Information Requirements and Time Management Regulations* (the IRTM Regulations) have potential to apply to a broad range of matters. The *Consultation Paper on the Information Requirements and Time Management Regulations* (Consultation Paper on IRTM Regulations) proposes that they will prescribe the documents the Agency would provide to proponents and make publicly available. Such documents would include Impact Assessment Cooperation Plans, public and Indigenous engagement plans, and tailored impact statement guidelines. The Consultation Paper on IRTM Regulations also proposed that the IRTM Regulations prescribe information that proponents would be required to provide during the early planning stage.

Section 18 of the IAA requires the Agency to post a notice of commencement of the assessment containing:

a) the information or studies that the Agency considers necessary for it to conduct the impact assessment; and

b) any documents that are prescribed by regulations made under paragraph 112(a), including tailored guidelines regarding the information or studies referred to in paragraph (a) and plans for cooperation with other jurisdictions, for engagement and partnership with the Indigenous peoples of Canada, for public participation and for the issuance of permits.

Section 112(a) authorizes the Minister to enact regulations prescribing the "documents referred to in paragraph 18(1)(b)." Thus, the Minister may make regulations respecting anything she decides should be in documents the Agency posts along with the notice of commencement.

Under this interpretation, the Minister has broad power to include in the IRTM Regulations any provisions respecting: the development of the assessment plan, including with respect to public participation, the identification and consideration of alternatives, non-proponent information and analysis, and sustainability criteria and rules to guide the development of both the tailored Impact Statement Guidelines and the Impact Statement, as well as how reviewing bodies and decision-makers consider, analyze and apply information.

Pursuant to section 112(b), the Minister may also make regulations respecting the manner of designing follow-up programs.

The Framework authors strongly recommend that these matters be included in the IRTM Regulations.

B. General Provisions

The IRTM Regulations should apply to all stages of project assessment, from the planning phase through to monitoring and follow-up. They should:

1. Impose a duty of scientific integrity on the proponent and other parties to the assessment as a standard term of reference to complement and enhance the section 6(3) requirement duty of scientific integrity for federal authorities, and require the use of the best available scientific information in balance with Indigenous knowledge;
2. Set out rules and principles to ensure IAs are undertaken in a precautionary manner and provide guidance on how federal authorities are to apply a precautionary approach in accordance with section 6(2) of the IAA;
3. Require the identification of a project's purpose, needs and rationale from a societal perspective, in addition to those from a proponent's perspective;
4. Establish rules and principles for identifying and assessing alternatives to the project;
5. Establish criteria and rules for determining whether the project or one of its alternatives is the best option for contributing to sustainability and therefore is in the public interest, which should guide the identification of information, analysis and follow-up programs;

6. Prescribe how cumulative effects should be considered and local and regional boundaries identified, and establish responsibilities for gathering and analyzing information related to cumulative effects, both when there is and there is not a current regional assessment for the region; and
7. Set out responsibilities and processes for identifying relevant Canadian environmental obligations, commitments and goals for their application in assessments; and
8. Authorize the Agency to request federal authorities to help identify and fill information gaps in addition to the requirement in the IAA for federal authorities already in possession of relevant information to participate in the assessment.

Each of these matters is discussed in greater detail, below.

i. Best available information including with Indigenous Knowledge

The IAA includes a provision imposing a duty of scientific integrity on the Government of Canada, the Minister, the Agency and federal authorities, but not on the proponent or other parties.[9] The IRTM Regulations should:

1. Require proponents and all persons who are exercising their authority under the Act to use the best available scientific information, which the Act does not do;
2. Place the burden of proof on the proponent to demonstrate that, from among the alternatives (including the no-project alternative), and the all information before reviewing authorities and decision-makers, the project is the best option for fostering sustainability, upholding Indigenous rights and authority, and helping Canada achieve its environmental obligations, and therefore is in the public interest.

The Framework authors understand that separate regulations are being developed on the use of Indigenous knowledge. Either those regulations, or the IRTM Regulations, should include requirements or principles for how scientific information and Indigenous knowledge are to be interwoven and considered together as evidence in the assessment. Either of these should be developed in collaboration with Indigenous peoples, as Indigenous-led guidance on how Indigenous knowledge is considered in assessments is imperative. Indigenous knowledge and multi-jurisdictional collaboration are closely linked, and the regulations should respect Indigenous authority, rights and ownership of Indigenous knowledge.

ii. Precautionary approach

Section 6(2) of the IAA requires the Government of Canada, the Minister, the Agency and other federal authorities to apply the precautionary principle when exercising their powers under the IAA.

a) Definition

Multiple versions of the precautionary principle exist, and the IAA does not include a definition to clarify which standard should be used. It also does not set out a framework for how decision-makers should apply the precautionary principle. Absent guidance on when the precautionary principle should be applied, how, and what version or strength of the principle should be used, it is likely that authorities will struggle to adhere to the principle when carrying out their duties under the IAA. The following definitions provide guidance.

The 1990 Bergen Ministerial Declaration on Sustainable Development defined the precautionary principle:

> [w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation.[10]

Two years later, the *Rio Declaration on Environment and Development* introduced "cost effective" into the definition, as follows:

> [w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.[11]

9 IAA at Section 6(3).

10 Bergen Ministerial Declaration on Sustainable development (1990) at ART 7; Conference on "Action for a Common Future," Bergen, Norway, May 8-16, 1990.

11 Rio Declaration on Environment and Development, Principle 15, UN Doc A/CONF 151/26 (vol I); 31 ILM 874 (1992).

These definitions contain two crucial conditions that must be met in order to trigger application of the principle: (1) a threat of serious or irreversible harm, and (2) a lack of full scientific certainty.[12] In impact assessment, it is not appropriate to limit the application of precaution to measures that are "cost effective." Unlike a statute that imposes a positive duty on a government authority, the proponent ultimately has a choice over whether to accept the conditions of approval imposed under the *Impact Assessment Act*: to proceed with the project according to the conditions of approval, or not proceed. It is the proponent who may decide whether measures are economically feasible. The decision-maker's responsibility is to apply the precautionary principle in such a manner that ensures that projects do not pose threats of serious or irreversible damage, and therefore foster sustainability and are in the public interest.

The above definitions of the precautionary principle lack guidance important to ensuring that IA decisions regarding selection of alternatives that best contribute to sustainability: namely, that decisions favour low-risk options and anticipate errors in predictions.

Thus, the IRTM Regulations should include the following definition of the precautionary principle for the purposes of the IAA:

> "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation. Assessments and decisions should respect uncertainty, avoid even poorly-understood risks of serious or irreversible damage to the foundations of sustainability, plan to learn, design for surprise and manage for adaptation"

b) Application

A definition by itself is not sufficient. Expectations on when and how a precautionary principle is to be applied (i.e., how a precautionary *approach* should be applied) should also be clarified in the IRTM Regulations, and further in guidance.[13] Also, because adaptive management is not meant to "counterbalance" the precautionary principle (acknowledging that applying the precautionary principle could mandate an adaptive management in a follow up program) the IRTM Regulations should define and set the role of adaptive management in the context of applying the precautionary principle.

Legislation, jurisprudence and assessment reports from other jurisdictions is instructive. The Mackenzie Valley Review Board applies a precautionary approach when:

1. A lack of information causes a level of uncertainty that is unacceptable, in the Board's view; and,
2. There is potential for serious environmental harm.[14]

Where those two "conditions precedent" are present, the Board applies "an appropriate level of precaution" to its decisions.[15] According to the Board's Rules of Procedure, the person seeking to convince the Board of their point of view bears the burden of proof of doing so.[16] Thus, the proponent bears an onus to prove that there is sufficient certainty that the project will not cause serious environmental harm, and that proposed mitigation will be effective.[17]

12 Charles Birchall *et al,* "Navigating Environmental Risk: When and How to Apply the Precautionary Principle" (December 22, 2017), online: https://www.willmsshier.com/docs/default-source/articles/navigating-environmental-risk-when-and-how-to-apply-the-precautionary-principle---cjb-jd-ja-and-rj---december-22-2017.pdf at 3, 16.

13 Birchall et al, ibid at 16-17.

14 Mackenzie Valley Review Board, *Report of Environmental Assessment and Reasons for Decision, Canadian Zinc Corp. Prairie Creek All Season Road Project EA1415-01* (12 September 2017) at 40 [MVRB Report, Canadian Zinc]: http://reviewboard.ca/upload/project_document/Report%20of%20Environmental%20Assessment%20-%20Sept%2012%202017.pdf**.**

15 *Ibid.*

16 MVEIRB Rules of Procedure for Environmental Assessment and Environmental Impact Review Proceedings (May 2005), Rule 17 (appears as rule 21 in the November 2018 update).

17 See, e.g., MVRB Report, Canadian Zinc, *supra* note 13 at 44.

The New South Wales Land and Environment Court[18] established a test for when the two conditions are present, which we recommend the IRTM Regulations adopt:

1. When determining whether there is a threat of serious or irreversible harm, the decision-maker should consider:
    a. The geographic extent of the potential harm;
    b. The magnitude of the potential harm;
    c. Whether there is the likelihood of impacts on Indigenous rights;
    d. The duration or persistence of the potential harm;
    e. The timing of the potential harm;
    f. The frequency of the potential harm;
    g. The complexity and connectivity of effects, including cumulative and interactive effects;
    h. The manageability of the potential harm (having regard to the availability and acceptability of means);
    i. Public concern regarding the effects; and
    j. The reversibility of potential effects, and if reversible, the timeframe, difficulty, and expense associated with reversing possible impacts.
2. When determining whether there is a lack of scientific certainty, decision- makers should use a test of "reasonable scientific plausibility" and consider:[19]
    a. The sufficiency of evidence that there might be a threat;
    b. The degree of uncertainty;
    c. The kind of uncertainty; and
    d. The potential to reduce the uncertainty having regard to what is technically and economically feasible and within a reasonable timeframe.

The Nunavut Impact Review Board (NIRB) uses different standards of the precautionary principle, depending on the seriousness or irreversibility of potential impacts posed by the project, the likelihood that potential impacts could be mitigated or reversed, and public concern.[20]

In Australia, the New South Wales Land and Environment Court has also held that the application of precaution should be proportionate to the environmental risk.[21] The appropriate type and level of precautionary measures depends on 1) the degree of seriousness and irreversibility of the threat, and 2) the degree of uncertainty. In other words, the more significant and uncertain is the threat, the greater is the degree of precaution required.[22]

Drawing on these examples, the IRTM Regulations should:

1. Require assessment authorities to identify the degree of certainty in impact predictions, mitigation and proponent commitments.
2. Establish that a higher degree of precaution is required where the degree of seriousness and irreversibility of the threat is high, or where there is a considerable degree of uncertainty. Where there is risk of significant adverse impact on the environment, health, social conditions or Indigenous rights, or a project would hinder Canada's ability to meet its environmental obligations, the degree of precaution should prevent the project from proceeding unless the alternative is an even more significant impact (see Appendix C for model sustainability criteria and rules).

18 *Telstra Corporation Limited v Hornsby Shire* Council, [2006] NSWLEC 133 at para 131 [*Telstra*].

19 See *Telstra* at para 141.

20 Revised Final Hearing Report, Black River Gold Mine Project, Sabina Gold & Silver Corp NIRB File No 12MN036, Nunavut Impact Review Board (July, 2017) [Revised Final Hearing Report] at 65.

21 *Telstra* at para 166-67.

22 *Telstra* at para 161.

3. Direct decision-makers to apply precautionary measures where possible risks are adequately backed up by the scientific data but where "the reality and extent of the risk have not been 'fully' demonstrated by conclusive scientific evidence."[23]

See section entitled Follow-up and Monitoring for a discussion of how adaptive management should play a role in the application of precaution in impact assessments.

iii. Public interest purpose, needs and rationale

The IRTM Regulations should require the Agency to identify the project's public interest purpose, need and rationale for how the project meets that purpose and need, in the planning phase. Proponents may describe a project's purpose and need from their perspective, but are not well placed to identify broader purpose, need and a rationale from a societal perspective, whereas the Agency may do so based on public engagement and Indigenous consultation. A clearly-identified societal purpose, need and rationale is important for selection of the option from among the alternatives that best meets the public interest objectives listed in section 63 of the Act.

iv. Alternatives

The IRTM Regulations should provide guidance respecting the identification and comparative assessment of reasonable alternatives from a public interest perspective, beginning in the planning phase and continuing throughout the assessment and decision-making. Alternatives should be defined broadly, with the assumption that both alternatives to the project and alternative means of carrying it out will be on the table rather than off, especially in the planning phase.

The IRTM Regulations should ensure that the public and Indigenous peoples are meaningfully informed of and engaged on potential alternatives and their effects. They should also ensure that assessments of alternatives robustly consider all relevant information and potential effects are appropriately described, and that the project and alternatives are comparatively evaluated.

It is not reasonable to expect the proponent to be best-placed to identify, describe and assess alternatives for which it would not be the proponent (other than the "no project" scenario); therefore the IRTM Regulations should address how the Agency should engage the public and work with Indigenous and provincial jurisdictions on alternatives during the planning phase, and incorporate assessment of alternatives in the assessment plan.

The IRTM Regulations should:

1. Explicitly allow public comment on the proponent's summary of pre-planning phase engagement, including any summaries of consultation on alternatives;
2. Require the Agency (or review panel, if one is appointed in the planning phase) to collaborate with other jurisdictions and engage the public on alternatives to be included in the assessment plan;
3. Explicitly allow any person to propose an alternative to the project;
4. Ensure that, especially in the planning phase, the public has sufficient detail regarding potential alternatives to be able to have an informed discussion of them;
5. Apply rigorous information requirements for presentation of the alternatives, including location, design, technology, a basic description of effects, and how the alternative would meet the societal purpose, needs and rationale;
6. Require the Agency to include in the assessment plan a plan for gathering information and an independent assessment of how the section 22 factors and section 63 criteria apply to the alternatives, including the alternative's impacts on Indigenous rights and territories; and
7. Clarify that identification of alternative means may occur throughout the assessment, in order to allow for project design adaptation and responsiveness to information.

23 Telstra, para 159; Birchall at 18-19.

It is important to note that meaningful comparative evaluation of alternatives necessarily entails comprehensive information gathering and analysis respecting the alternatives that are on the table. A brief treatment of alternatives appended to an Impact Statement will not suffice.

In some cases, project proponents may only wish to be the proponent of the proposed project and certain alternative means of carrying it out. Other parties may propose alternatives (such as geothermal power as proposed by geothermal industry participants in the assessment of the Site C dam), which should also be able to have meaningful examination. Decision-makers should be clearly enabled to make conclusions about whether the proponent has proven that the project is the best option for meeting the societal purposes, need and rationale. The burden of proof should be on the proponent to prove that is the case.

v. Sustainability

For the first time in federal EA history, the IAA introduces the requirement to consider "the extent to which the designated project contributes to sustainability" when assessing projects (section 22(1)(h)), as well as when determining whether it is in the public interest (section 63(a). The explicit reference to sustainability is a welcome improvement, but raises questions respecting what information is required to assess the extent to which a project fosters sustainability, as well as how decision makers consider that information alongside the other enumerated factors under section 63 when determining whether a project is in the public interest.

"Contribution to sustainability" is a multi-faceted factor. It pertains to other factors enumerated in section 22 (such as environmental, social, health and economic matters), and involves such considerations as inter and intra-generational equity, positive and negative effects, and trade-offs among and within factors.[24] Both the novelty and complexity of sustainability as a factor under the IAA point to the need for regulatory prescription and policy guidance respecting what information is needed in order to assess the extent to which a project contributes to sustainability as well as to determine whether a project is in the public interest having consideration of the same.

a) Sustainability as a factor to consider

The IRTM Regulations should clarify what information may be required in order to assess the extent to which a project contributes sustainability. They should:

1. Establish requirements respecting information that will be relevant to all assessments;
2. Require the Agency to identify further information on a project-by-project basis; and
3. Establish guidance for the Agency on what information may be relevant when tailoring the Impact Statement Guidelines on a project-by-project basis.

See Appendix C for proposed IRTM Regulations requirements respecting the information that Agency must include in assessment plans (i.e., the tailored impact statement guidelines).

b) Sustainability framework test

24 The *Centre québecois de droit de l'environnement* (CQDE) highlights that the sustainability framework proposed in Bill C-69 and the language of the decision-making provisions in ss. 60 and following indicate a necessary change in logic from the decision-making framework of CEAA 2012 s. 52(2) where the utilitarian logic born out of the economic sciences has too often been used to justify project approvals. Indeed, a project variation that has both significant benefits (economic spin-offs) and drawbacks (impacts on an ecosystem) has often been preferred over other variations with less significant but better distributed benefits and drawbacks. Instead, the concept of sustainability requires a change of logic. Using the "outranking synthesis methods" developed in the field of operational research could provide a promising way to ensure a project is viable in light of previously defined principles and standards. Such a method would also make trade-offs more explicit. See Gilles Côté, Ph D. Bill C-69 Submission to the House of Commons Environment and Sustainable Development Committee, April 2018 http://www.ourcommons.ca/Content/Committee/421/ENVI/Brief/BR9808902/br-external/CoteGilles-9805968-e.pdf; based on Gilles Côté, Jean-Philippe Waaub & Bertrand Mareschal, "L'évaluation d'impact environnemental et social en péril: la nécessité d'agir", VertigO, Vol. 17, No. 3, 17 pages, December 2017

The second aspect of the sustainability factors in the IAA that requires regulatory treatment is how the information described above should be analyzed in order to determine whether the project contributes to sustainability. At its core, sustainability involves the interaction of multiple elements (in the IAA, these are health, social, economic and environmental). Given that the projects that will be subject to the IAA will likely have the potential for environmental harm, trade-offs from among and within the various elements of sustainability are also likely. The IRTM Regulations should provide guidance and rules for how the Agency, Minister, review panels and Governor in Council apply the information gathered in the assessment when determining whether the project contributes to overall sustainability.

Specifically, the IRTM Regulations should set out a sustainability framework test that includes criteria and trade-off rules to guide the Agency's or review panel's conclusions and recommendations in respect of the extent to which the project fosters sustainability, and for the purposes of the public interest determination under section 63.

Conceptually, the criteria would act as questions to guide determinations of which option from among the alternatives is the best for achieving environmental, social, health and economic well-being. They are not hard rules, but rather goals to encourage project planning and assessment that seek to maximize positive outcomes rather than merely avoid or mitigate negative ones.

The criteria relate to the information requirements of assessments because they would be a helpful guide for:

1. Proponents as they plan projects, consider alternatives, gather and analyze information, and form greater certainty about whether and to what extent their proposal may be deemed to foster sustainability;
2. The public, as they prepare for and undertake participation in the assessment, and in order to have greater clarity and certainty about how reviewing bodies, the Minister and Cabinet may determine that a project or alternative will foster sustainability;
3. Indigenous peoples and jurisdictions, as they engage in consultation or co-planning and conduct of assessments;
4. Reviewing bodies and panels, as the case may be, as they identify what information and analysis is required and draw conclusions respecting whether the project or alternatives foster sustainability; and
5. Decision-makers, as they determine whether and to what extend the project and alternatives foster sustainability and are in the public interest.

Because the criteria are in nature more akin to principles than rules, and because some trade-offs may be acceptable (e.g., in order to avoid an even more significant adverse effect) trade-off rules are needed for situations where projects are unable to meet all sustainability criteria. For example, an option will not foster sustainability and therefore will not be in the public interest if it is clearly incompatible with Canada's environmental obligations, or will result in the crossing of an ecological threshold.

In order to ensure decisions reflect the environmental, social, economic and health context of individual assessments, the IRTM Regulations should also require the Agency, in collaboration with other involved jurisdictions, to establish assessment-specific criteria and rules based on information and engagement from the planning phase. See Appendix C for proposed specific criteria and rules for determining whether a project is in the public interest.

vi. Cumulative effects assessment

Cumulative effects assessments vary widely across assessments and are subject to much criticism, particularly when limited to project-level assessments. The Agency's cumulative effects assessment guidance is not always followed, leading to inconsistency among assessments, lack of public trust and weak assessments. In addition to Agency guidance, the IRTM Regulations should set out a framework for scoping cumulative effects assessment at the project level that analyses the impacts of alternative scenarios of possible, yet contrasting, futures (see below).

a) Spatial and temporal boundaries

An assessment's spatial and temporal boundaries are often contested and vary greatly across assessments. For the Site C Dam EA, the temporal baseline was at the time of the EA, meaning that the environmental 'norm' considered was one of the most industrialized landscapes in British Columbia. On the other end of the spectrum, the Jackpine Mine Expansion EA applied a pre-industrial baseline in order to capture historical industrial impacts to the landscape. Generally, regulations and policy should guide scoping of temporal and spatial boundaries to provide greater certainty and ensure the use of best practices.

Specifically, for spatial boundaries, the IRTM Regulations should:[25]

a) Require the identification of both local and regional study areas;

b) Require that distinct spatial boundaries be determined for each valued component (VC) and its interactions;

c) Require regional boundaries to be drawn in consideration of human concern and wellbeing, Indigenous rights and consultation, interactions among effects from all past, present and future activities, and a precautionary approach;

d) Require that regional boundaries be ecologically defensible;

e) Require regional boundaries to capture the zone of influence;

f) Acknowledge that for some valued components, national or international regional boundaries may be appropriate;

g) Require consideration of other projects and activities when identifying spatial boundaries where appropriate; and

h) Encourage adjustments to spatial boundaries during the assessment if new information arises that warrants such a change.

For temporal boundaries, the IRTM Regulations should:[26]

a) Require, wherever possible, the identification of historical boundaries that demonstrate the pre-industrial baseline, allowing for modelling or surrogate data in the absence of actual data on valued components;

b) Allow for multiple historical baselines where appropriate, including sequential snapshots, baselines of when a land or resource designation, order or other action was made, etc.;

c) Allow for multiple future temporal boundaries; and

d) Require a future temporal boundary that is after project abandonment or reclamation.

For both spatial and temporal boundaries, the IRTM Regulations should require boundary identification to be made in consideration of Indigenous and community knowledge, where available, and to be accompanied by a rationale for the chosen boundaries.

b) Actions that contribute to cumulative effects

In addition to past, existing and reasonably foreseeable future actions, the IRTM Regulations should require cumulative effects assessments to include effects of past, present, future and induced actions, including potential development scenarios. Future scenarios must include both certain and reasonably foreseeable actions and have the potential to include hypothetical actions. Regarding induced actions, the IRTM Regulations should require inclusion of actions that there is a reason to believe will occur.

It is important to note that the proponent may not be the best party to provide all information respecting cumulative effects, such as the potential effects of induced actions. In some cases, it may be appropriate for the planning phase to identify cumulative effects studies that should be submitted by Indigenous peoples, the federal government, or other jurisdictions or parties.

vii. Canada's environmental obligations: climate and biodiversity

25 From Hegmann *et al, Cumulative Effects Assessment Practitioners Guide* (1999), online: https://www.ceaa-acee.gc.ca/Content/4/3/9/43952694-0363-4B1E-B2B3-47365FAF1ED7/Cumulative_Effects_Assessment_Practitioners_Guide.pdf at 13-15; and Canadian Environmental Assessment Agency, Technical Guidance for Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012 (2014), online: https://www.ceaa-acee.gc.ca/Content/B/8/2/B82352FF-95F5-45F4-B7E2-B4ED27D809CB/Cumulative_Environmental_Effects-Technical_Guidance-Dec2014-eng.pdf at 14-19.

26 Hegmann et al, ibid at 15-17; *Canadian Environmental Assessment Agency, ibid* at 20-27.

The IAA requires assessments to consider the extent to which projects help or hinder Canada's ability to meet its environmental commitments and obligations. The Minister or Cabinet, as the case may be, must consider the same when determining whether the project is in the public interest.

The IRTM Regulations should prescribe how information respecting considerations related to Canada's environmental obligations, such as climate and biodiversity, should be gathered and analyzed in the assessment. They should also guide the determination of the extent to which the project would hinder or contribute to those obligations.

Proponents should not be expected to be able to identify all government obligations, commitments and policies. Therefore, the IRTM Regulations should require federal departments and agencies with relevant knowledge of such obligations, commitments and policies to make those known early in the assessment, and assist the proponent, Agency, public and other jurisdictions to understand their implications for the project's implications for them.

a) Climate in the IRTM Regulations

Assessing projects' climate implications has proven to be one of the most hotly contested elements of environmental assessment in Canada in recent years. Where climate mitigation considerations have been included in assessments, they have often been limited to untested assertions by proponents that rely on "ambiguous and/or inconsistent definitions of GHG emission levels as well as significance of GHG emission impacts" and employ "scale tricks" in reference to GHG emissions relative to different baselines (often national or global) to conclude that project emissions are insignificant.[27]

Recurring questions contested in past project assessments include: (1) the scope of indirect emissions to assess, (2) acceptable methodology, (3) determination of significance, and (4) whether emissions' contributions towards overall carbon budgets, and (5) whether goals should serve as a proxy for contributions to climate impacts.[28] These debates have been unduly difficult in part because long term global climate impacts are not directly tied to the emissions and sink impairments of individual projects subject to assessment. The IAA resolves this problem by focusing instead on effects on "the Government of Canada's ability to meet its […] its commitments in respect of climate change." The consequence, however, is a need for the government to clarify the implications of these commitments for individual projects.

The IRTM Regulations will need to provide guidance and prescribe requirements respecting assessment of climate to ease financial and temporal burdens on participants, provide greater certainty to proponents, achieve greater consistency among assessments, and enable the Agency, review panels, Minister and Cabinet to determine whether projects are consistent with Canada's obligations under the *Paris Agreement.*[29]

Specifically, the IRTM Regulations should:

1. Provide a definition of GHG emissions, which includes the scope of direct and indirect lifecycle and lifespan emissions and sink effects that should be assessed;
2. Establish guidance for determining the scope of climate considerations in each assessment through streaming for different categories of projects based on anticipated climate impacts;
3. Establish a framework for determining the extent to which a project helps or hinders Canada's ability to meet its international and domestic climate obligations; and
4. Specify the information required in order to make the above determination.

The federal government has committed to undertake a strategic assessment of climate change to provide climate-related guidance for the IAA. This Framework is based on existing knowledge and federal regulatory intentions announced to date. Future updates to the Framework may be required based on the outcomes of the strategic assessment of climate.

27 Ohsawa T, Duinker P., Climate-change mitigation in Canadian environmental impact assessments. *Impact Assessment and Project Appraisal* 2014 September 2014; 32(3): 222-233 at 222 and 230. The paper analyses all completed federal environmental impact assessments as of November 2013.

28 See, e.g., Chris Tollefson and Anthony Ho, "Sustainability-Based Assessment of Project-Related Climate Change Impacts: A Next Generation EA Policy Conundrum" (2016) 30 JELP 1 at 67.

29 The Paris Agreement, 22 April 2016, UNTS art 12 (entered into force 4 November 2016) [Paris Agreement] online: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&lang=_en&clang=_en.United Nations.

These climate-related regulatory and policy recommendations should also be established under the *Canadian Energy Regulator Act*[30] to ensure consistency between projects assessed under the IAA and those reviewed by the Canadian Energy Regulator and to ensure that the smaller projects not subject to the IAA with potential cumulative implications for Canada's ability to meet its climate obligations.

Definition of GHG emissions

The IRTM Regulations should define "GHG emissions" as all associated direct and indirect lifespan and lifecycle emissions, including:

- Direct emissions (e.g. emissions from the construction and operation of a project);
- Indirect emissions (e.g. emissions from the manufacture of components, material transported, equipment etc., could also include emissions from harm to sinks, leakage, and induced emissions etc.). In the fossil fuel industry, these include upstream and downstream[31] emissions;
- The effects on carbon sinks and reservoirs through land-use changes, whether direct or indirect;
- Emissions resulting from activities that are associated with the project or its alternative, including electrification, transportation, and fugitive emissions;
- Emissions that occur over the lifespan of the project, including exploration, construction, operations, decommissioning and residual effects (e.g. emissions which may continue beyond the life of the project, such as abandoned wells leaking methane);
- Embedded emissions associated with the manufacture of components of a product or project;
- Changes in emissions both within and outside Canada;[32] and
- Any other emissions associated with a project or its alternative.[33]

Some of these concepts overlap in terms of GHG emission coverage and not all of them may be significant or relevant in the assessment of projects depending on sectors and technologies used, hence scoping the climate inquiry of each project will be key.

Scoping and identifying climate information

Ensuring that the reviewing bodies and decision-makers have comprehensive information about climate effects is crucial both for determining the extent to which a project helps or hinders Canada's ability to achieve its necessary GHG reductions, as well as for fostering the education and public awareness commitments under the Paris Agreement.[34]

It is important to note that section 22(2) of the IAA requires the Agency, or Minister if the assessment is referred to a review panel, to determine the scope of factors to be considered in an assessment. As with other factors, not all climate information will be relevant to or available for all projects; for example, while downstream emissions for fossil fuel projects can be readily estimated, the downstream emissions of projects for which end-uses are uncertain, such as some types of mineral mines, may be too uncertain to reliably assess quantitatively. As a result, the Agency or Minister will be required to determine and justify the scope of the climate factors to consider in an assessment.

As a result of the section 22(2) power that enables the Agency or Minister to scope out of the assessment any information that is irrelevant or not sufficiently certain, the IRTM Regulations can, and should, prescribe the breadth of climate-related information to assess, including all potential direct and indirect lifecycle and lifespan emissions.

30 House of Commons of Canada, Canadian Energy Regulator Act, part 2 of Bill C-69, as passed by the House of Commons and introduced in the Senate, 20 June 2018, ss. 183(2)(j), 262(2)(f), and 298(3)(f), online: https://www.parl.ca/LegisInfo/BillDetails.aspx?billId=9630600&Language=E

31 Downstream emissions have been required in the context of federal assessments in the United States: M. Burger, M. & S. Wentz, "Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review", (2016) 41 (1) Harvard Environmental Law Review, Vol. 41, No. 1, 2016.

32 The question of whether emissions occur inside or outside Canada may warrant a distinction at the decision-making phase but is irrelevant at the information-gathering phase.

33 See Appendix E for language used under the US *National Environmental Policy Act 42 U.S.C. §4321 et seq. (1969).*

34 Article 12 of the Paris Agreement states: "Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps with respect to enhancing actions under this Agreement."

Prescribing streams of climate-related information requirements for different types of projects is one way the IRTM Regulations could ensure relevant information is considered while guarding against needlessly overburdening projects with lesser climate impacts. Projects with the greatest climate significance should receive the most rigorous climate assessment, while projects less likely to hinder progress toward meeting our commitments or that are specifically designed for climate mitigation and adaptation and have demonstrably little likelihood of adverse impacts can have lesser information requirements.

The most rigorous process to establish compliance with Canada's climate commitments and goals would be applicable to all projects *a priori* inconsistent with climate commitments, such as new or proposed expansions of fossil fuel infrastructure. This stream would require quantification of the full scope of GHG emissions listed above (including downstream emissions) and an analysis of compatibility of climate commitments, including the full costing of climate effects and compliance with decarbonization pathways. Only exceptional projects that could demonstrate compliance with Canada's climate commitments should be expected to pass at the decision-making stage. Justifying factors could include sufficient offsets, a limited time and scale of other impacts, low GHG-intensity and pressing public purpose such as energy security for Indigenous people.

The IRTM Regulations should also prescribe a middle stream for projects whose consistency with climate commitments is not readily knowable and not likely to be significant. This stream of assessment would apply to sectors which can, on their face, be consistent with Paris commitments, but which require some degree of proof of consistency. For example, the metal mining sector may, depending on the on the specific resource mined, warrant less burdensome indirect emissions quantification and analysis if there is great uncertainty as to the widespread and varied ultimate use of the resource. Still, the IRTM Regulations should require as much information on the lifecycle emissions as possible to be disclosed, even if only a qualitative discussion is possible.

Finally, the IRTM Regulations should establish a light stream for projects whose consistency with climate commitments seems certain due to prior demonstration at a strategic or regional assessment level. This stream would apply to projects designed for climate mitigation, minor in scale, not inconsistent with decarbonization, subjected to a climate regulatory scheme that is consistent with Canada's commitments, and that apply BAT that ensure little to no overall net GHG emissions or sink losses.

All streams would require consideration of issues related to climate adaptation and impacts of future climate change on the project.

In no way should a demonstration of consistency with meeting climate commitments be interpreted as an automatic justification of any other adverse effects.

The IRTM Regulations should prescribe information listed below and analysis to be considered, subject to the Agency's scoping determination. While all information components should be considered in the most rigorous climate stream, details on some components may prove insignificant or irrelevant in the lesser streams:

- all GHG emissions, reductions, and effects on Canada's overall GHG emissions as a result of associated industrial and sink effects through land-use changes;
- mitigation measures to reduce potential GHG emissions and adverse effects on GHG sinks;
- measures to enhance existing GHG sinks or establish new GHG sinks;
- measures to offset any residual GHG emissions;
- any federal climate policies, plans or programs, including sectoral or regional carbon budgets;
- a description of any trade-offs between climate factors, or between climate and other factors; and
- all necessary monitoring and follow-up and adaptive management information and requirements, including how follow-up programs may enable the project or alternatives to meet Canada's progressively ambitious reduction commitments over time.[35]

35 Inspired by Robert Gibson et al., "From Paris to projects: Clarifying the implications of Canada's climate change mitigation commitments for the planning and assessment of projects and strategic undertakings" Part 4 (publication forthcoming)

BOX 1: GHG EMISSIONS IN IAA POLICY

Beyond the IRTM Regulations, policy should be developed to clarify which GHG emission and sink effects are to be considered, including criteria for determining:

- what qualifies as a GHG sink enhancement that may be taken into account in assessments (e.g., guidance on determining the likely performance and permanency of proposed enhancements); and
- what, if any, offsets for domestic or international GHG emissions or GHG sink degradation may be taken into account (e.g., guidance on determining the likely performance and permanency of proposed offsets).

Decisions respecting climate

As with the general Sustainability Framework Test recommended above, the IRTM Regulations should prescribe a Climate Framework Test, which would guide how assessment authorities and decision-makers use climate-specific information to determine whether a project helps or hinders Canada's ability to meet its climate commitments.

BOX 2: CANADA'S CLIMATE COMMITMENTS

Canada has committed to do its fair share to:

- keep overall climate warming "well below 2°C" and to pursue efforts to limit the increase to 1.5°C above pre-industrial levels;"[36]
- achieve global peaking of GHG emissions as soon as possible and to reach GHG neutrality in the second half of this century at the latest, "on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty;"[37] and
- anticipate regular review and revision of signatories' commitments to reflect progressively increasing nationally determined contributions that represent each signatory's "highest possible ambition."[38]

These commitments are to be met while also ensuring respect for human rights, including Indigenous rights, and pursuing other sustainability objectives such as preserving biodiversity and adapting to climate change.

As explained above with respect of determinations of whether a project will contribute to sustainability, the IRTM Regulations should provide guidance to the Agency, review panels, Minister and Governor in Council on how to apply the information respecting climate in assessments when determining the extent to which the project helps or hinders Canada's ability to meet its climate obligations and commitments. Specifically, in order to enable rigorous analysis and to ensure compliance with the Paris commitments, the Climate Framework Test should prescribe how:

- determine which option, from among the project and its alternatives, best meets prescribed climate-specific criteria (see Appendix E Climate Test);
- the climate criteria relate to other sustainability criteria;
- identify case-specific criteria to help determine consistency to Canada's climate commitments;

35 Inspired by Robert Gibson et al., "From Paris to projects: Clarifying the implications of Canada's climate change mitigation commitments for the planning and assessment of projects and strategic undertakings" Part 4 (publication forthcoming)

36 The Paris Agreement, 22 April 2016, UNTS art 12 (entered into force 4 November 2016) [Paris Agreement] online: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&lang=_en&clang=_en.United Nations, Article 2.1; Implications of achieving this temperature goal detailed in the latest IPCC report of October 2018 would point to even greater efforts required than previously expected. Intergovernmental Panel on Climate Change (IPCC). Global Warming of 1.5 °C: Summary for Policymakers; IPCC, 2018. Available online: http://www.ipcc.ch/report/sr15/.

37 Paris Agreement, Article 4.1.

38 Paris Agreement, Article 4.3, Article 14.

- determine what initiatives would qualify as legitimate offsets for GHG emissions and adverse sink effects;
- determine adequacy of adaptive design to meet more demanding future climate change mitigation and adaption requirements; and
- include and address climate-related costs and future Paris-compliant markets in economic analyses.[39]

To employ the Climate Framework Test, the IRTM Regulations should require that climate-related damage estimates be presented alongside purported economic benefits of the project and that project conditions require avoiding or compensating for any contributions to the cost of achieving Canada's climate obligations.

b) Biodiversity in the IRTM Regulations

As with climate, Canada has international obligations respecting biodiversity. It is important that impact assessment under the IAA pay close attention to biodiversity effects; not simply to better ensure Canada meets its domestic and international obligations and goals, but also to help safeguard livelihoods and foster opportunities for economic development that depends on ecosystem services.

Biodiversity resources are being degraded and lost globally at an increasing pace, and one of the most important drivers of this trend is habitat conversion or loss caused principally by unsustainable land-use practices and inappropriately located development. Moreover, the definition of biodiversity is considerably broader than just species at risk, which is where most impact assessments tend to be limited. Thus, considerations related to biodiversity will be an integral component of any impact assessment.

BOX 3. BIODIVERSITY-RELATED INTERNATIONAL OBLIGATIONS

The main global conventions commonly considered as 'biodiversity-related' to which Canada is a signatory are:

- The Convention on Biological Diversity, 1992 (the CBD);
- The Convention on Wetlands, 1971 (the Ramsar Convention);
- The Convention on Migratory Species, 1979 (the CMS, or Bonn Convention);
- The Convention on International Trade in Endangered Species, 1973 (CITES); and
- The Convention Concerning the Protection of the World Cultural and Natural Heritage, 1972 (the World Heritage Convention).

The role of biodiversity and ecosystems services are strongly reflected in the United Nations 2030 Agenda for Sustainable Development; not only in Sustainable Development Goals (SDGs) 14 and 15, but also in targets with respect to poverty, food security, cities and other SDGs. If the SDGs are not implemented in an integrated fashion, with due consideration for biodiversity, implementation may have adverse impacts on biodiversity, and in turn compromise the progress of other SDGs. The use of project, regional and strategic-level assessment is thus highly relevant to SDG implementation.

39 At a minimum, the social cost of GHGs attributable to the project over its lifetime and subtracted from the forecasted public benefits of the project. The current approach to social costs has been archived on ECCC's website without explanation. Technical Update to Environment and Climate Change Canada's Social Cost of Greenhouse Gas Estimates (March 2016) online: http://ec.gc.ca/cc/default.asp?lang=En&n=BE705779-1.

The Agency has had operational guidance on assessing biodiversity in project-level assessment since 1996.[40] However, the guidance has not been consistently applied in federal assessments, pointing to a need for regulatory requirements in addition to policy respecting biodiversity. In particular, the IRTM Regulations should:

- Provide a comprehensive definition of biodiversity;
- Prescribe information required in order to meaningfully assess the biodiversity implications of a proposed project; and
- Specify what assessment authorities and decision-makers should consider when determining the extent to which the project and its alternatives help or hinder Canada's ability to meet its biodiversity commitments and goals.

Definition of biodiversity

It is important that the IRTM Regulations include a comprehensive definition of biodiversity in order to ensure that assessments under the IAA fulsomely examine all aspects of biodiversity and help ensure that approved projects help Canada achieve its biodiversity commitments and obligations. The CBD's definition of biodiversity is a good model:

> "Biological diversity" means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.[41]

The Agency's existing guidance document adopts this definition. Moving the definition into the IRTM Regulations will better ensure attention by both proponents and the Agency in adherence to this standard.

Biodiversity information and decision-making requirements

The International Association for Impact Assessment has recommended best practices for considering biodiversity, which should be adopted for impact assessments under the IAA. To ensure consistency and highest standards in federal assessment, the IRTM Regulations should require the following information to be considered:[42]

- The distribution patterns, threat status, sensitivity and levels of protection of affected ecosystems, habitats and species;
- Federal objectives, priorities, policies, performance standards and targets for biodiversity and ecosystem services;
- The significance of biodiversity for livelihoods, health, cultural practices and protection from natural hazards, along with trends in the condition or availability of those resources and local, regional and national valuation of biodiversity;
- Limits to what can be lost, harmed, restored or offset, taking into account the irreplaceability and vulnerability of affected biodiversity and the levels of dependence on natural systems by affected communities;
- The functional role of the development area in the wider landscape, its buffering role for protected or priority areas, and its role in connecting habitats or ecosystems across climatic or topographical gradients that gives them resilience in the face of climate change;
- Any key biodiversity sites, along with the reasons for the site's designation, explanations of the status of its values, functions and attributes, its conservation objectives, and any management plan that exist;
    - Seasonality and natural cycles and variability,
    - Impacts of biodiversity losses on livelihoods and quality of life,
    - Important sites for the persistence of biodiversity, and
    - Non-protected indicator species.

40 Canadian Environmental Assessment Agency and Biodiversity Convention Office, Guide on Biodiversity and Environmental Assessment (April 1996): https://www.ceaa-acee.gc.ca/default.asp?lang=En&n=7392AC38-1.

41 The Convention on Biological Diversity of 5 June 1992 (1760 UNTS 69), Art 2.

42 From International Association for Impact Assessment, "Biodiversity Assessment FasTips."

viii. Federal authorities' obligation to provide information

The IAA requires federal authorities to make specialist or expert information or knowledge available to the Agency on the Agency's request, if the authority is in possession of such knowledge. However, it does not require federal authorities to provide specialist or expert information that it may not already be in possession of.

To ensure the meaningful and timely engagement of federal authorities, the IRTM Regulations should enable the Agency to request federal authorities to help identify and fill information gaps, including through additional studies and peer-review, and require federal authorities to cooperate.

C. Agency's Section 16 Determination

Section 16(1) of the IAA requires the CEA Agency to decide whether an impact assessment of the designated project is required.

Impact assessment as a planning tool goes far beyond simply identifying mitigation measures and ensuring that proponents use best available technology (BAT) or best environmental practices (BEP). Done right, impact assessment also assists in identifying the best options for carrying out the project and the best options for meeting societal and proponent needs and objectives. It can also facilitate public buy-in, advance reconciliation and contribute to long-term community well-being. Therefore, the Agency's determination under section 16 should not just focus on whether, after mitigation, the project would have adverse environmental impacts above a certain threshold or whether the proponent has committed to using BAT or BEP. Rather, the Agency should determine whether the project will result in noteworthy adverse environmental impacts within federal jurisdiction and if so, whether another federal process will provide opportunities to achieve consensus with Indigenous jurisdictions, ensure sustainability, help the achievement of Canada's international obligations, and meaningfully engage the public.

The IRTM Regulations should establish the information that the Agency needs in order to reach that determination. Specifically, the IRTM Regulations should provide that the Agency may only determine that a designated project does not require an impact assessment if the Agency determines that, in light of the information provided in the planning phase, public engagement on the determination, and the consensus of Indigenous jurisdictions:

1. The project will not result in any environmental impacts within federal jurisdiction; or
2. The project may result in environmental impacts within federal jurisdiction, and there is another federal process, or a substituted process, that would:
    a. Meaningfully engage the public in accordance with the IAA, regulations and policy (including by providing participant funding);
    b. Seek the consensus of Indigenous jurisdictions and uphold the rights of Indigenous peoples;
    c. Examine alternatives to the project and alternative means of carrying out the project;
    d. Consider the factors listed in section 22 of the IAA; and
    e. Contain a decision-making process that ensures projects foster sustainability, help Canada achieve its environmental obligations, and otherwise achieve the purposes of the IAA.

D. Required Documentation

i. Proponent Documents

a) Initial Project Description

In addition to the factors listed in Annex I of the Consultation Paper on the IRTM Regulations, the IRTM Regulations should require initial project descriptions to include:

1. Any potential future expansions or additions;

2. Any reasonable alternatives to the undertaking or alternative means of carrying it out that the proponent has identified or that have been brought to the proponent's attention;
3. A brief description of any regional or strategic assessments relevant to the undertaking (completed, underway, planned, or proposed) and alternatives, their location, and sufficient evidence to demonstrate how the undertaking and alternatives are consistent or inconsistent with the outcomes of any such assessments;
4. A list of any federal, provincial, local government or Indigenous protected areas, land and resource use plans, and local government zoning or other bylaws applicable to the project and alternatives;
5. Activities that are related to the undertaking and alternatives, as well as physical works and activities that may be induced by them (e.g., enhanced access provided as a result of the undertaking or alternatives) and
6. The proposed duration or life span of all activities, infrastructure and structures associated with the project and alternatives.

b) Detailed Project Description

In addition to the factors listed in Annex I of the Consultation Paper on IRTM Regulations, the IRTM Regulations should require detailed project descriptions to include:

1. A description of any potential future expansions or additions, and the impacts of those expansions or additions;
2. A detailed description of alternatives to the undertaking and alternative means of carrying it out;
3. A description of any regional or strategic assessments relevant to the undertaking and alternatives and their location, the outcomes of those assessments, and sufficient evidence to demonstrate how the undertaking is consistent or inconsistent with those outcomes;
4. A list of any federal, provincial, local government or Indigenous protected areas, land and resource use plans, and local government zoning or other bylaws applicable to the project and alternatives;
5. Activities that are related to the project and alternatives, as well as physical works and activities that are induced by them (e.g., enhanced access as a result of the undertaking);
6. The proposed duration or life span of all activities, infrastructure and structures associated with the project and alternatives;
7. A description of *all* potential changes to the environment within the legislative authority of Parliament as a result of the project and alternatives, including induced effects. For climate effects, these include:
    a. Quantification of annual direct emissions over the lifespan of the project, including disaggregated data as to whether SLCPs are expected to be emitted and their quantity,
    b. Qualitative description of related activities (induced development, etc.) and energy sources used,
    c. Description of the receiving environment in terms of the presence of important carbon sinks, such as peatlands or forests (including unmanaged forests), and how they will be affected,
    d. Description of the receiving environment in terms of climate sensitivity (relative to sea level, flood plain, etc.);
8. A description of any other potential changes relevant to community, health or economic sustainability as a result of the project or alternatives;
9. A description of the project's and alternatives' implications for Canada's ability to meet its environmental obligations and its commitments in respect of climate change; and
10. A description of any effects in addition to those within federal jurisdiction, including induced effects.[43]

43 See *Friends of the Oldman River Society v Canada (Minister of Transport),* [1992] 1 SCR 3, [1992] 2 WWR 193.

ii. Agency Documents

a) Summary of Issues

The Agency's summary of issues will be an important step in preparing a tailored impact assessment. The IRTM Regulations should set out some basic requirements respecting the summary of issues to ensure agreement and buy-in at this early stage. Specifically, the IRTM Regulations should require the summary of issues to include a summary of the Agency's analysis of the proponent's early engagement, based on any public feedback on the summary of early engagement provided by the proponent to the Agency. Additionally, the summary of issues is the logical first place to identify any case-specific issues and principles to guide the determination of whether the project contributes to sustainability and what information and analysis is required to arrive at that determination. For example, in addition to setting out key valued components and systems, the summary of issues should include what "sustainability" means in the particular context and according to affected Indigenous peoples, authorities and non-Indigenous communities. The IRTM Regulations should thus require the Agency to identify in collaboration with Indigenous peoples and through public engagement case-specific criteria, principles and values to guide the information and analysis needed to determine whether a project or its alternatives contributes to sustainability. These case-specific criteria should be guided by the generic criteria provided in Appendix C.

Climate matters should also always be included in the summary of issues. The summary should provide an indication of the stream of climate test for the project, which could vary by sector and be tailored to a specific project (see above for a discussion of climate test streams).

As a general rule, the IRTM Regulations should require an assessment of attributable (all causally-connected and reasonably identifiable) GHGs and those associated with alternatives as well as their costs, regardless of the project specifics or scoping stream. Further, linking GHG emissions with overall climate impacts, globally and ideally including localized impacts in the region of the project, should constitute automatic issues to be considered in all project assessments, given the importance and urgency of the climate crisis and the necessary public learning.

Finally, the IRTM Regulations should require the Agency to provide reasons for including or not including issues in the summary of issues, to ensure transparency. Finally, as noted below, there should be a comment period on both the summary of issues and the proponent's response to the issues.

b) Impact Assessment Cooperation Plan

The IRTM Regulations should require the Agency to produce this plan in collaboration with other jurisdictions. To that end, the Regulations should contain the following provision:

> *Prior to issuing a notice of commencement for an impact assessment under section 18(1) of the Act, the Agency must develop a conduct of assessment agreement in collaboration with any jurisdiction and any Indigenous group referenced in section 12 of the Act, informed by public comments provided under section 11 of the Act.*

This plan should provide for the gathering of climate-relevant information, including legislation, from all involved jurisdictions and the mobilization of their internal climate expertise.

c) Information, Analysis and Review Plan

In addition to public and Indigenous engagement plans, the IRTM Regulations should require the Impact Assessment Cooperation Plan to include a plan for supplementing, analyzing and reviewing the proponent's information (e.g., through third-party studies and peer-review). It should also provide for the preparation of the Agency or review panel report.

The IRTM Regulations should require the Impact Assessment Cooperation Plan to include:

1. The scope of the assessment, including the factors to be considered;
2. Information that will be provided by parties other than the proponent (e.g., federal departments, provincial or Indigenous entities, independent actors);

3. Plan for peer-review of the proponent's information, and of any other studies or information that the Agency identifies as benefiting from or requiring peer-review;
4. Articulation of how best available science, Indigenous knowledge and community knowledge are to be considered and weighed in the assessment;
5. Details of how provincial and Indigenous processes and decision-making will align;
6. How the outcomes of project, regional and strategic assessment outcomes are to guide the assessment;
7. How monitoring and follow-up information from other undertakings is to be applied in the assessment;
8. Any other matter addressed in a collaboration agreement that the Minister has entered into with any provincial or Indigenous jurisdiction or affected Indigenous group;
9. Suggested timelines and funding requirements for the assessment;
10. Case-specific criteria to guide the Minister or Cabinet's, as the case may be, determination under section 63 (which would also be included in the tailored impact statement guidelines – see below);
11. Any environmental, social, economic and health values, concerns, priorities and plans; and
12. Any other information relevant to the assessment.

Relevant expertise (e.g., related to climate, biodiversity, etc.) is both highly localized in terms of local impacts and adaptation needs and delocalized in terms of understanding the mitigation significance of different projects. The IRTM Regulations should provide for engagement with relevant experts, require, for example, independent studies of GHG attribution methodologies, modelling and significance analysis and propose a process to do so, making the most of remote participation information technology.

a) Tailored Impact Statement Guidelines

A key purpose of the planning phase is to better tailor assessments to the specific circumstances, contexts and needs of projects, communities, jurisdictions, environment and rights-holders. Thus, the proposal to tailor the impact statement guidelines for each assessment is welcome. However, it raises the question of what information to include in the tailored impact statement guidelines (TISGs), and what approach to use in deciding what to include. To ensure credible and thorough assessments that focus on pertinent issues, the IRTM Regulations should require the Agency to identify relevant issues and provide a rationale for inclusion and exclusion in the TISGs.

Additionally, the IRTM Regulations should require the TIGs to include a set of case-specific criteria to guide what information and analysis is required to determine whether the project or its alternatives contribute to sustainability. These criteria would elaborate on the generic sustainability-based criteria described in Appendix C. The TIGS should also detail what climate information should be included in the impact statement.

Finally, the IRTM Regulation should specify that certain guidelines, such as those to come out of the strategic assessment on climate change, are binding in assessments.

b) Public Engagement Plan

The IRTM Regulations must prescribe a definition of meaningful public participation, its basic principles, and criteria for developing the contents of the public engagement plan. For the definition, the Framework authors recommend adopting that proposed by the EPA Caucus:[44]

> *Meaningful public participation establishes the needs, values, and concerns of the public, provides a genuine opportunity to influence decisions, and uses multiple and customized methods of engagement that promote and sustain fair and open two-way dialogue.*

The IRTM Regulations should also set out additional criteria and requirements to guide the development of the public engagement plan. See Appendix D for proposed principles to guide the development of the public engagement plan, based on those set forth by the Multi-Interest Advisory Committee appointed by the Minister to advise on the federal environmental assessment review.

44 Submission of the Environmental Planning and Assessment Caucus, Réseau Canadian Environmental Network to the Standing Committee on Environment and Sustainable Development (6 April 2018), Appendix at 5: online, http://rcen.ca/sites/default/files/caucus_submission_to_envi_committee_-_appendix_2018-04-06.pdf.

While it is important to be able to tailor participant plans to the needs and desires of participants, as well as to assessment circumstances, in order to ensure meaningful participation the Regulations should include some basic requirements:

1. Allow the public to comment on the proponent's summary of pre-planning phase engagement;
2. Require public engagement on the proponent's summary of issues;
3. Require the Agency to produce detailed reasons for its section 16 determination;
4. Require engagement on the preparation of the documents the Agency produces during the planning phase, as well as on draft versions of those documents;
5. Require that for each time the clock is stopped for the proponent or another party to produce new information, that the clock "stoppage" include a period following the submission of the new information sufficient to allow for meaningful and informed review and response to that information;
6. Require the participation plan to ensure that participation throughout the assessment is iterative, deliberative and ongoing;
7. Require the Agency to maintain a toolbox of participatory tools other than hearings and comment periods, and to select from those tools when designing the participation plan;
8. Enable the Agency to appoint independent facilitators to facilitate public engagement, including by assisting in the design of the participation plan;
9. Require the participation plan to include at least one in-person engagement opportunity, unless the public has not demonstrated any interest in in-person engagement; and
10. Require the Agency to provide the public an opportunity for the public, Indigenous peoples and other jurisdictions to cross-examine the proponent's experts.

Additionally, the Regulations should set out basic criteria respecting participant funding, including that funding be allocated early in the planning phase and be commensurate with the scope of potential effects and public interest in the project.

c) Information from Other Undertakings

To better foster learning, the IRTM Regulations should require the Agency to identify any previous assessments and follow-up programs of similar projects, projects that have occurred in similar biophysical, socio-economic and cultural environments, projects in the local or regional study area with impacts that may interact with the impacts of the project at hand, or projects that in any other way may provide guidance for the assessment. Additionally, the Agency should ensure that information from any relevant regional or strategic assessments is applied in the assessment. Depending on the circumstances, it may be appropriate for a party other than the proponent, such as Environment and Climate Change Canada, to provide that information.

Information on GHG trends of other sectors and other projects will be key in order to properly assess the climate impacts of a project. This information should be made publicly available, models used should be open sourced and not considered proprietary. Data should always be provided in both a disaggregated and aggregated manner.

d) Follow-up and Monitoring

Follow-up, including and monitoring and response to monitoring findings, is integral to evaluating accuracy of predictions, informing improvements to mitigation and enhancement measures, enabling adaptive management and ensuring compliance, as well as fostering learning for the project and the assessment regime at large. However, much of current follow-up is not public or used to inform subsequent assessments and decision-making. Additionally, adaptive management, which can be a critical tool in follow-up to require the proponent to change environmental management should assessment predictions fall short, has been greatly misused in environmental assessments. While the legislated requirement in the IAA to post follow-up program information on the Agency registry is a welcome change, the IRTM Regulations must set out further requirements respecting formal monitoring, evaluation and adaptive management.

To that end, the IRTM Regulations should:

1. Require the Agency to post on the Registry a summary of commitments and obligations made during the IA, by the proponent, government authorities, or other parties;
2. Require the Agency to include on the Registry an updated document tracking implementation of conditions of approval and commitments made;
3. Require the Agency to include on the Registry any orders or other documents related to non-compliance, and any other enforcement or adaptation measures; and
4. Define and establish principles and standards of adaptive management, including by requiring the Minister, before approving any adaptive management plan, to ensure that:
    a. Adaptive management is not being used as a "substitute for committing to specific mitigation measures;"
    b. The adaptive management plan is enforceable, for example, by being incorporated into a federal authorization that permits the project to proceed;
    c. Management experimentation is the best way to identify and implement new environmental management strategies to continue to improve environmental performance;
    d. The plan includes robust baseline information about the receiving environment, and that gaps are acknowledged;
    e. The plan will provide for effective monitoring of adverse effects using appropriate indicators, and discern the effects of different management actions;
    f. Any proposed change in environmental management be made public and the public is given opportunities to comment and meaningfully participate;
    g. Monitoring will be sufficient to determine the effects of management action and identify need for change in environmental management;
    h. The plan will trigger immediate action before effects become higher than a defined threshold;
    i. Potential failures are acceptable or reversible/remediable;
    j. The proponent (or party responsible for carrying out the adaptive management plan), the regulating federal authority, and the Agency have sufficient support and resources to implement it;[45] and
    k. The plan will be rigorously implemented.

45 Anna Johnston, "Imagining EA 2.0: Outcomes of the 2016 Federal Environmental Assessment Reform Summit" 30 JELP 1 at 11-12: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2843098; Sustain Our Sounds Inc. v the New Zealand Salmon Co, [2014] NZSC 40 at para 133.

E. Time Management

In addition to the circumstances described in the Consultation Paper on the IRTM Regulations, the IRTM Regulations should require the Minister to stop the clock where requested by an Indigenous authority in order to allow it to meaningfully exercise its authority according to its own laws and processes, and by Indigenous rights-holders in order to ensure meaningful consultation. The public should be allowed to request that the clock be stopped for the provision or review of information, and the Minister required to respond publicly to any response.

The IRTM Regulations should also provide for how any stopping of the clock will include sufficient time for reviewing bodies, the public, jurisdictions and federal and other experts to meaningfully review and comment on any new information.

Finally, the IRTM Regulations should explicitly permit the Agency, during the planning phase, to identify when the clock may be stopped, or recommend any time extensions that the Minister or Cabinet may grant under the IAA.

5. REGIONAL/STRATEGIC ASSESSMENT REGULATIONS

This section reviews the need for potential regulations for regional assessments and strategic assessments under the *Impact Assessment Act.* The *Impact Assessment Act* enables the Minister to appoint a committee or authorize the Agency to conduct a regional assessment (RA) of existing or future physical activities carried out on, partly on, or outside federal lands. She may also appoint a committee or authorize the Agency to conduct a strategic assessment (SA) of a federal policy, plan or program that is relevant to conducting IAs, or any issue relevant to conducting IAs of designated projects.[46]

Any person may request an RA or SA, and the Minister must respond within the time period prescribed in regulations. The terms RA and SA are not defined in the legislation, nor does the Act contain any process requirements, or requirements respecting outcomes and their application. It only states that a project assessment must consider any relevant RA or SA conducted under the IAA.[47]

A. Relevant Regulatory Provisions

The Minister has powers to enact regulations respecting the procedures, information requirements and time periods relating to *impact assessments* only (RA and SA are not mentioned).[48] Section 109 authorizes the Governor-in-Council to make regulations prescribing anything that the IAA says is to be prescribed,[49] and generally, for carrying out the purposes and provisions of the IAA.[50]

The preamble of the IAA notes that the Government recognizes the importance of regional and strategic assessments. A purpose of the Act is "to ensure that opportunities are provided for meaningful public participation during an impact assessment, a regional assessment or a strategic assessment,"[51] and the Agency's participant funding program must also apply to SAs and RAs.[52] Other relevant purposes include to foster sustainability,[53] "to encourage the assessment of the cumulative effects of physical activities in a region and the assessment of federal policies, plans or programs and the consideration of those assessments in impact assessments;"[54] to promote "cooperation and coordinated action between federal and provincial governments, and between the federal government and Indigenous governing bodies with respect to impact assessments;"[55] and "to ensure that an impact assessment is completed in a timely manner."[56]

These statutory purposes highlight the fact that the successful conduct of RAs and SAs is integral to the design and functioning of the IAA. Well-conducted R/SAs can lead to better understanding of issues, reduced conflict, and more efficient project-level assessments. Achieving the purposes of the IAA therefore depends on RAs and SAs.

46 IAA at Sections 92-93, 95.

47 IAA at Section 22(1)(p).

48 It could be argued that RIA and SIA are kinds of impact assessment; however, it is also possible that a court would find that the legislators intended for impact assessment to refer to project assessment, distinct from RIA and SIA.

49 IAA at Section 109(f).

50 IAA at Section 109(h).

51 IAA at Section 6(1)(h).

52 IAA at Section 75(1)(c).

53 IAA at Section 6(1)(a).

54 IAA at Section 6(1)(m).

55 IAA at Section 6(1)(e).

56 IAA at Section 6(1)(i).

B. Stand-alone Regulations are Required

The proposed Information Requirements and Time Management Regulations will be Ministerial regulations, enacted pursuant to her powers under sections 112(a), (a.1), (b) and (c) respecting assessments of designated projects. While those regulations may prescribe how the outcomes of an RA or SA are to be applied at the project level, they cannot prescribe definitions of RA or SA, their processes, scope, or other matters respecting RA and SA. Further regulatory guidance is therefore required to ensure the conduct of RAs and SAs.

The Minister has the power in section 93 to enter into agreements or arrangements with jurisdictions, setting out the establishment of joint committees to conduct RAs, and how such RAs are to be conducted. Short of an amendment to the IAA giving explicit authority for RA- and SA-related regulation-making powers to the Minister, which would be most logical in light of section 93, the necessary regulations should be developed using the Governor in Council's existing IAA regulation-making powers.

The time period in which the Minister must respond to a request for an RA or SA may be prescribed in a regulation made by the Governor in Council under section 109(f). Also, as ensuring meaningful public participation in RA and SA is a purpose of the IAA, the Governor in Council should use its general regulation-making power to enact regulations respecting aspects of RA and SA such as public participation and other process requirements, definitions, and the form and application of their outcomes. The Framework authors will hereby refer to these proposed regulation as the Regional/Strategic Assessment Regulations (R/SA Regulation).

The benefits of RA and SA can only be realized once the necessary regulations are in place. We therefore recommend that the Agency set in motion immediately the development of regulations enabling the conduct of RAs and SAs. While an amendment to the Agency's Forward Regulatory Plan (FRP) may be considered necessary,[57] we note that Natural Resources Canada and the National Energy Board have recently indicated their intention to develop regulations that do not appear in the current FRP of either body.[58]

C. Contents of Regulations

i. Triggering

The R/SA Regulations should establish the following factors for the Minister to consider when deciding whether to appoint a committee or order the Agency to conduct a regional or strategic assessment, including in response to public and other requests for a RA or SA:

1. Whether an important strategic issue (e.g. a policy, plan or program gap or uncertainty, including one due to the emergence of a new concern or an inadequate or incomplete response to an existing concern) that is relevant to a category of undertakings including projects subject to assessment under IAA has emerged that cannot be addressed adequately in a project level assessment;
2. Whether a region is facing significant development pressures, including from past and ongoing activities;
3. Whether a proposed undertaking is growth-inducing with respect to further development in a relatively undisturbed region;
4. Whether assessing and managing cumulative effects on an area of federal legislative authority would be better addressed at a scale beyond that of a particular project;
5. Whether the Minister is aware of potential multiple similar proposals in a region or strategic policy, plan of program field with the potential for cumulative effects on an area of federal authority;
6. Whether recommended by the ministerial advisory committee or expert committee; and
7. Whether requested by an Indigenous jurisdiction or rights-holder.

57 See Section 1. A. "Federal Regulatory Process and the Impact Assessment Act," infra.

58 Natural Resources Canada, "Public Notice" (September 12, 2018): https://www.nrcan.gc.ca/21389.

ii. Process

The R/SA Regulations should set out a framework to ensure that RAs and SAs are thorough, achieve desired objectives, and are tiered with project IAs and regulatory processes. To this end, the regulations should:

i. For both RA and SA, require early outreach to other jurisdictions on the identification of the particular issues, needs or objectives to be met, the assessment process, and the expected or desired outcomes (e.g., preferred development scenarios, ecological limits, plans, programs);

ii. For RA, require early outreach to other interests and experts (e.g., local governments, the public, proponents);

iii. Require an assessment planning phase for RAs and SAs, concluding with an assessment plan that is developed in collaboration with relevant Indigenous jurisdictions and provincial jurisdictions where appropriate, and which is based on the best available scientific information (including non-government science) and Indigenous knowledge;

iv. Establish that a key purpose of RA and SA is to examine existing and potential regional and policy problems and opportunities and identify means of acting strategically to reduce the risks of adverse cumulative social, economic, health and environmental effects and enhance prospects for overall sustainability with mutually supporting social, economic, health and environmental aspects;

v. Establish that another purpose of RAs and SAs is to identify ecological limits where they can be measured based on benchmarks of low relative ecological risk for key values and rights. The regulation should require that assignment of risk and identification of ecological limits be based on:

   a. best available evidence, including Indigenous law and knowledge,

   b. management objectives for desired states of lasting ecological and human well-being, and

   c. likely outcomes and relative ecological risk associated with current and future conditions.

vi. For RAs and SAs, require the assessment of alternative development scenarios of possible futures (desirable and undesirable-but-plausible), selection of preferred scenarios, and determination of pathways for achieving the preferred scenario (while being prepared for adverse eventualities) consistent with (ii);

vii. Require the application of fundamental principles, processes and purposes, e.g., meaningful public participation, jurisdictional cooperation, transparency and accountability, and a sustainability framework and objectives, in line with those recommended for the *Information and Time Management Regulations*;[59] and

viii. Require periodic (e.g., every five years) updates to RAs and SAs, including by taking into account information from project IAs and regulatory approvals.

iii. Outcomes

See the above section on the IRTM Regulations for how RA and SA outcomes should be considered in project assessment.

Section 102(1) of the IAA requires the Agency or committee established to conduct an RA or SA, as the case may be, to produce an assessment report, but aside from inclusion of Indigenous knowledge, the Act does not specify what should be included in that report.

As a result, the IRTM Regulations should require that reports include:

1. Findings concerning the issues involved; and
2. Recommendations for government action, including recommendations for applying outcomes in project-level assessments and for federal policies, plans, programs or other strategic measures, in light of the factors set out in section 63 of the IAA and the criteria set out in Appendix C.

59 See Appendix C for proposed sustainability criteria and rules, and principles of meaningful public participation.

The R/SA regulations should also specify what the Minister should consider when reaching a decision on the outcomes of a regional or strategic assessment. In addition to long-term social, environmental, economic and health well-being, the regulations should require him or her to consider:

1. For RA and SA:
    a. Whether the project meets the sustainability criteria and rules set out in the IRTM Regulations (see Appendix C),
    b. The purposes of the IAA,
    c. The existence or likely future development by other jurisdictions of regional or strategic assessment, or land or resource use plans,
    d. Any existing policies, plans or programs that are relevant to the assessment and affect the purposes of the IAA, and
    e. Whether affected areas are susceptible to rapid or significant changes due to future development, environmental changes (e.g., climate change, ecosystem breakdown, etc.);
2. For SA:
    a. Whether the assessment involves a new type of project or technology,
    b. Changes in scientific understanding of the issues,
    c. New or existing international obligations or commitments,
    d. Budgetary issues, including federal funding,
    e. Policy gaps, and
    f. The ability of the plan, policy or program to affect projects.

6. SCHEDULES

The *Impact Assessment Act* provides for several schedules to be established to include lists of different entries as follows:

- Schedule 1, which includes "any other body" deemed to be a federal authority (ss. 2, 109(a)). Examples included on Schedule 1 of Bill C-69 are port authorities and offshore boards;
- Schedule 2, which includes lands that are subject to a land claims agreement (ss.4, 110) ;
- Schedule 3, which includes "any other component of the environment," a change to which constitutes an "effect within federal jurisdiction" (s. 2);
- Schedule 4, which includes "any other body" to which sections 81 to 91 (Duties of Certain Authorities in Relation to Projects) apply (s. 81)

A. Effects within Federal Jurisdiction a Change to Components of Environments Set out in Schedule 3

The definition of "effects within federal jurisdiction" includes changes to components of the environment such as fish and fish habitat, aquatic species, and migratory birds. In Section 3 of this Framework - Project List Regulations, the authors suggest that this definition include effects within federal interest.

Several additions to Schedule 3 are proposed below in order to clarify and confirm that impact assessments under the IAA must consider project-related impacts on these components of the environment.

Greenhouse gas emissions are a first example of a component of the environment, a change to which constitutes an effect within federal jurisdiction that should be added to Schedule 3. GHG emissions are already regulated as toxic substances under the *Canadian Environmental Protection Act, 1999.* Further, the *Greenhouse Gas Pollution Pricing Act* was enacted by Parliament earlier this year, receiving Royal Assent on June 21, 2018. Given this federal legislative and regulatory response and the overwhelming evidence that increasing GHG emissions threaten potentially catastrophic disruptions to Canada's climate, they should be listed on Schedule 3.

Air pollutants, including those that cause smog, also should be included in Schedule 3 as a component of the environment, a change to which constitutes an effect within federal jurisdiction. As stated in Section 3 of this Regulatory and Implementation Framework, the reduction of toxics and smog pollution is a long-standing environmental priority of the federal government. The Canadian Council of Ministers of the Environment (CCME) have developed the Canadian Ambient Air Quality Standards (CAAQSs) as the primary driver of air quality management across Canada. CAAQSs for nitrogen dioxide, sulphur dioxide, fine particulate matter and ozone have been developed by the CCME. Further, CAAQSs for fine particulate matter and ozone are established as objectives under sections 54 and 55 of the *Canadian Environmental Protection Act, 1999.* Surely, therefore, these air pollutants are components of the environment, a change to which constitutes an effect within federal jurisdiction.

7. GUIDELINES AND POLICY ADVICE

For some issues, the development of guidelines or policy advice may be preferable to development of regulations; in other cases regulations may simply not be an option due to limited regulatory authority or to the application of overarching government policies that discourage regulations. Currently, the website for the Canadian Environmental Assessment Agency indicates that the Agency has issued the following guidance documents with respect to *CEAA 2012:*

Operational Policy Statements

- Assessing Cumulative Environmental Effects under *CEAA 2012*
- Addressing "Purpose of" and "Alternative Means" under *CEAA 2012*
- Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under *CEAA 2012*
- Information Requests and Timelines

Technical Guidance

- Assessing Cumulative Environmental Effects under the *Canadian Environmental Assessment Act, 2012*
- Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under the *Canadian Environmental Assessment Act, 2012*
- Guide to Preparing a Description of a Designated Project under *CEAA 2012*
- Technical Guidance for Assessing Physical and Cultural Heritage or any Structure, Site or Thing that is of Historical, Archeological, Paleontological or Architectural Significance under *CEAA 2012*
- Technical Guidance for Assessing the Current Use of Lands and Resources for Traditional Purposes under the *CEAA 2012*

Reference Guides

- Cost Recovery for Environmental Assessments by Review Panels under *CEAA 2012*
- Participant Funding Program – National Program Guidelines under *CEAA 2012*
- Participant Funding Program Application Forms under *CEAA 2012*
- Practitioners Glossary for the Environmental Assessment of Designated Projects Under *CEAA 2012*
- Public Participation in Environmental Assessment under the *Canadian Environmental Assessment Act, 2012*
- Considering Aboriginal Traditional Knowledge in Environmental Assessments conducted under *CEAA 2012*
- Designating a Project under *CEAA 2012*
- Screening Process under *CEAA 2012*

Most of these guidance documents will need to be updated to reflect changes legislated through Bill C-69. Some of the guidance documents may need to be codified in a regulation as well as updated. In addition, new guidance documents will be needed to address new areas of focus in the IAA such as sustainability, regional assessment and strategic assessment.

To guide implementation, a first priority should be updating the Operational Policy Statement "Assessing Cumulative Environmental Effects *under CEAA 2102*." The Reference Guide "Public Participation in Environmental Assessment under the *Canadian Environmental Assessment Act, 2012*" should also be updated on a priority basis to reflect changes in legislation through Bill C-69. To ensure public participation in the new IAA framework, the Reference Guides on participant funding, "Participant Funding Program - National Program Guides under *CEAA 2012*" and "Participant Funding Program Application Forms under *CEAA 2012*" will also need to be updated.

A further priority is to provide guidance with respect to the conduct of regional and strategic assessments under the IAA. This Framework proposes that much of this guidance should be set out as regulations under the IAA. However, further guidance is likely to be needed to supplement these regulations.

Also, further guidance on assessing and making decisions respecting climate should be developed in addition to the regulatory provisions recommended above. The approach developed in the United States under the general framework of US *National Environmental Policy Act* and regulations, which is summarized in Appendix F, may be instructive.

Regulation-making and other Authorities under the *Impact Assessment Act*

This appendix outlines the regulation-making powers granted to the Governor in Council and Minister of Environment and Climate Change (the Minister) under the IAA. It also outlines non-regulatory powers provided to the Minister as well as the Impact Assessment Agency (Agency) that is established under Bill C-69.

A. Regulation-making Authority

i. Governor in Council's Regulation-making Authority

Section 76(1) authorizes the Governor in Council to make regulations respecting fees, charges or levies in order to recover costs incurred by the Agency or review panels during an assessment.

Section 109 further authorizes the Governor in Council to make regulations:

- Amending the list of "federal authorities" in Schedule 1, and other authorities in Schedule 4. Federal authorities and other authorities set out in Schedule 4 have obligations respecting activities carried out on federal land or outside Canada pursuant to sections 82-91, and federal authorities have certain additional duties and obligations under the Act, such as making knowledge available to the Agency;
- Designating physical activities or classes of physical activities that are subject to the Act (the Project List);
- Exempting classes of proponents or designated projects from cost recovery regulations made under section 76(1);
- Varying or excluding any requirement set out in the Act or the regulations as they apply to physical activities to be carried out on lands subject to the *Indian Act* (e.g. reserves), lands covered by land claims agreements, or lands subject to agreements with another jurisdiction, as well as physical activities carried out under international agreements, or in relation to which there are matters of national security;
- Respecting agreements or arrangements with jurisdictions as defined in section 2 of the Act, or Indigenous governing bodies that the Minister enters into under section 114(1)(d) or (e);
- Prescribing anything that the Act says is to be prescribed;
- Prescribing the way in which anything that is required or authorized by the Act to be prescribed is to be determined; and
- Generally, for carrying out the purposes and provisions of the Act.

Section 110 allows the Governor in Council to add, replace or delete lands that are subject to a land claims agreement in Schedule 2.

ii. Minister's Regulation-making Authority

Section 112 authorizes the Minister to make regulations:

- Prescribing the information that must be contained in the proponent's description of a designated project and the documents required in a notice of commencement issued by the agency, as well as the format of descriptions, notices and studies and the manner of providing them;
- Respecting the procedures, requirements and time periods relating to impact assessments, including the manner of designing a follow-up program;
- Prescribing, where authorized in the Act, any activity in respect of which a time limit may be suspended, and respecting circumstances, in relation to an activity, in which a time limit may be suspended;
- Respecting a participant funding program established under section 75;
- Designating a physical activity or class of physical activities for which the Agency must establish a participant funding program;
- Respecting the Registry, including the identification of records or information to be posted on the Internet site and the establishment and maintenance of project files; and
- Respecting the charging of fees for providing copies of documents contained in the Registry.

B. Other Authority

The power to prescribe information that must be contained in a project description or in a notice of commencement is particularly important. As this framework will describe, it provides an opportunity to include additional guidance tailored to the needs of a particular assessment, such as a public participation plan or project-specific criteria.

i. Minister's Powers

Section 114 authorizes the Minister to:

- Issue guidelines and codes of practice respecting the application of the Act;
- Establish research and advisory bodies in the area of impact assessment, including with respect to the interests and concerns of Indigenous peoples of Canada, and appoint members of any such bodies;
- Enter into agreements or arrangements with jurisdictions and Indigenous governing bodies respecting effects assessments, and to exercise powers or perform duties or functions in relation to impact assessments under the Act;
- Establish criteria for the appointment of members of review panels; and
- Establish criteria for the appointment of members of committees established to undertake regional assessments.

ii. Agency's Powers

Section 156(2) authorizes the Agency to:

- Undertake studies or activities or conduct research relating to impact assessment;
- Advise persons and organizations on matters relating to the assessment of effects;
- Issue guidelines and codes of practice;
- Negotiate agreements or arrangements with jurisdictions or Indigenous governing bodies on the Minister's behalf; and
- Establish research and advisory bodies for matters related to impact assessment and monitoring committees for matters related to the implementation of follow-up programs and adaptive management plans, including with respect to the interests and concerns of Indigenous peoples of Canada, and appoint as a member of any such bodies one or more persons.

Proposed Entries for the Project List Regulations under the *Impact Assessment Act*

A. New Project List Entries

Law-List Type Entries

1. The proposed construction, alteration, expansion, decommissioning or abandonment of any designated project that requires a permit under subsection 35.1(2) of the *Fisheries Act.*
2. The proposed construction, alteration, expansion, decommissioning or abandonment of a work, undertaking or activity in an ecologically significant area that requires an authorization under subsection 35.2(7) of the *Fisheries Act.*
3. The proposed construction, alteration, expansion, decommissioning or abandonment of a major work in, on, over, under, through or across a navigable water that requires an approval by the Minister under subsection 5(1)(a) of the *Canadian Navigable Waters Act.*
4. The proposed construction, alteration, expansion, decommissioning or abandonment of a work - other than a minor work - in, on, over, under, through or across a navigable water that is listed in the schedule to the *Canadian Navigable Waters Act* that requires an approval by the Minister under subsection 5(1)(b) of the *Canadian Navigable Waters Act.*
5. The proposed construction, alteration, expansion, decommissioning or abandonment of any project to be located in critical habitat that is described in a recovery strategy published under section 43(3), is published in the Canada Gazette under section 58, or is subject to an order issued under section 80 of the *Species at Risk Act.*
6. The proposed construction, alteration, expansion, decommissioning or abandonment of any project requiring approval under s. 24 of the *Nuclear Safety and Control Act.*
7. Manufacture or import of Animate Products of Biotechnology determined by the Ministers of Environment and Climate Change and Health to be "toxic" under the *Canadian Environmental Protection Act, 1999.*

Entries Based on Federal Funding

8. The proposed construction, alteration, expansion, decommissioning or abandonment of a project for which a federal loan or other financial assistance in an amount greater than $10 million is to be, or has been made, to the proponent for the purpose of enabling the project to be project, except where the financial assistance is in the form of a reduction, avoidance, deferral, removal, refund, remission or other form of relief from the payment of a tax, duty or impost imposed under any Act of Parliament.

Entries Based on Environmental Effect in Area of Federal Interest

9. Construction or expansion of a facility whose operations are expected to release more than:
   a. 50,000 tonnes of greenhouse gas (GHG) emissions per year during the period prior to 2030;
   b. 25,000 tonnes of GHG emissions per year during the period from 2030 to 2040; or
   c. 5,000 tonnes of GHG emissions per year during the period after 2040.

Entries Based on Location in Ecologically Significant Federal Lands

10. a. The proposed construction, alteration, expansion, decommissioning or abandonment of a project or activity as requiring an assessment in a regional or strategic assessment carried out under the *Impact Assessment Act.*
    b. The expansion, decommissioning or abandonment of an existing project or activity identified as requiring an assessment in a regional or strategic assessment carried out under the *Impact Assessment Act.*

11. a. The proposed construction, alteration, expansion, decommissioning or abandonment of a project or activity located within 25 km of a community with potential effects within federal jurisdiction.

    b. The expansion, decommissioning or abandonment of an existing project or activity located within 25 km of a community, where the cumulatively impacts of industrial practices are expected to negatively impact the human and environmental health of the community, as identified in a regional or strategic assessment carried out under the *Impact Assessment Act.*

12. a. The proposed construction, alteration, expansion, decommissioning or abandonment of a project or activity to be located within 100 km of a provincial or territorial border or the Canada - United States border that proposes to or is likely to emit more than 90 tonnes per year of any one of the following:

        i. sulphur dioxide,
        ii. nitrogen oxides,
        iii. carbon monoxide,
        iv. total suspended particulates,
        v. or volatile organic compounds; or
        vi. more than 1 tonne per year of any hazardous air pollutant.

    b. The expansion, decommissioning or abandonment of any existing project or activity to be located within 100 km of a provincial or territorial border or the Canada - United States border that proposes to or is likely to emit more than 90 tonnes per year of any one of the following:

        i. sulphur dioxide,
        ii. nitrogen oxides,
        iii. carbon monoxide,
        iv. total suspended particulates,
        v. or volatile organic compounds; or
        vi. more than 1 tonne per year of any hazardous air pollutant.

Entries Based on the Characterization of a Project's Purpose

Forestry

13. a. Construction and operation of a new log sorting and handling facility.

    b. Expansion, decommissioning or abandonment of an existing log sorting and handling facility.

14. Construction and operation of a new mill producing wood products or pulp and paper.

15. Construction of roads with a length greater than 10 km for the purpose of forestry operations proposed pursuant to a forest management plan.

Infrastructure Impacting Navigable Waterways

16. a. Construction and operation of a new bridge, tunnel or causeway traversing a navigable waterway as defined in the *Canadian Navigable Waters Act.*

    b. Expansion, decommissioning or abandonment of an existing bridge, tunnel or causeway traversing a navigable waterway as defined in the *Canadian Navigable Waters Act.*

Aquaculture

17. a. Construction and operation of a new marine or freshwater aquaculture facility.

    b. Expansion, decommissioning or abandonment of an existing marine or freshwater aquaculture facility.

Electricity Transmission

18. Installation and operation of new power cables of length greater than 200 metres, underwater in a marine or freshwater body.

Ethanol Production

19. a. Construction and operation of a new ethanol fuel production facility.

    b. Expansion, decommissioning or abandonment of an existing ethanol fuel production facility.

Hydraulic Fracturing

20. a. Construction and operation of a new hydraulic fracturing (fracking) oil or gas development project.
    b. Expansion, decommissioning or abandonment of an existing hydraulic fracturing (fracking) oil or gas development project.

Electricity Generation

21. a. Construction and operation of a new geothermal electricity generation facility.
    b. Expansion, decommissioning or abandonment of an existing geothermal electricity generation facility.
22. a. Construction and operation of a new offshore wind electricity generation facility or an on-shore electricity-generation facility that includes five or more wind turbines.
    b. Expansion, decommissioning or abandonment of an existing offshore wind electricity generation facility or an on-shore electricity-generation facility that includes five or more wind turbines.
23. a. Construction and operation of a new solar electrical generating facility with a production capacity of 10 MW or more.
    b. Expansion, decommissioning or abandonment of an existing solar electrical generating facility with a production capacity of 10 MW or more.

Oil Sands

24. a. Construction and operation of a new facility employing in situ technologies to extract bitumen from oil sands whether through thermal techniques, solvents, a combination of thermal and solvent technologies, or any other technology allowing for in situ extraction of bitumen.
    b. Expansion, decommissioning or abandonment of an existing facility employing in situ technologies to extract bitumen from oil sands whether through thermal techniques, solvents, a combination of thermal and solvent technologies, or any other technology allowing for in situ extraction of bitumen.

Offshore Oil and Gas

25. Conduct of a new program of exploratory oil and gas seismic activities in offshore marine or freshwater water bodies.

Mine, Processing and Storage

26. a. Construction and operation of a new chromite mine.
    b. Expansion, decommissioning or abandonment of an existing chromite mine.
27. a. Construction and operation of a facility for concentration, smelting and/or refining of non-ferrous metals
    b. Expansion, decommissioning or abandonment of a facility for concentration, smelting and/or refining of non-ferrous metals

Road Infrastructure

28. Construction and operation of a new all-season public highway that requires a total of 50 km or more of new right of way.

Nuclear

29. Refurbishment of a nuclear power facility or life extension of a nuclear power generation facility.
30. a. Construction and operation of a new facility for the fabrication or processing of nuclear materials such as medical isotopes.
    b. Expansion, decommissioning or abandonment of an existing facility for the fabrication or processing of nuclear materials such as medical isotopes.
31. a. Construction and operation of a new facility for the storage or disposal of waste relating to nuclear materials such as medical isotopes.
    b. Expansion, decommissioning or abandonment of an existing facility for the storage or disposal of waste relating to nuclear materials such as medical isotopes.

32. a. Construction and operation of a new facility to refine uranium concentrates (i.e. yellowcake).

    b. Expansion, decommissioning or abandonment of an existing facility to refine uranium concentrates (i.e. yellowcake).

33. Initiation and conduct of a new program of physical activities to transport, import or export nuclear waste from a nuclear reactor facility to a facility that stores, recycles, reuses or disposes of nuclear waste.

Space Infrastructure

34. a. Construction and operation of a new facility for the launch of rockets or other projectiles designed to carry satellites, equipment or humans into orbit around the Earth or beyond the Earth's atmosphere.

    b. Expansion, decommissioning or abandonment of an existing facility for the launch of rockets or other projectiles designed to carry satellites, equipment or humans into orbit around the Earth or beyond the Earth's atmosphere.

Other

35. a. Construction and operation of a new facility that is proposed to require more than 10,000 gigajoules of natural gas annually for its operations.

    b. Expansion, decommissioning or abandonment of an existing facility that requires more than 10,000 gigajoules of natural gas annually for its operations.

B. Amendments to Existing Project List

Entries Based on Location in Ecologically Significant Federal Lands

CEAA 2012 Physical Activities

1 The construction, operation, decommissioning and abandonment, in a wildlife area or migratory bird sanctuary, of a new

a. electrical generating facility or electrical transmission line;
b. structure for the diversion of water, including a dam, dyke or reservoir;
c. oil or gas facility or oil and gas pipeline;
d. mine or mill;
e. industrial facility;
f. canal or lock;
g. marine terminal;
h. railway line or public highway;
i. aerodrome or runway; or
j. waste management facility.

48 The construction, operation, decommissioning and abandonment, in a wildlife area or migratory bird sanctuary, of

a. a new electrical transmission line; or
b. a new oil or gas facility or new pipeline.

IAA Physical Activities

Construction and operation of a new facility or infrastructure in, or with potential effects on, a

i. National Park,
ii. National Park Reserve,
iii. National Wildlife Area,
iv. Migratory Bird Sanctuary,
v. National Marine Conservation Area,
vi. Marine Protected Area, or
vii. Any other ecologically significant area identified pursuant to an international treaty to which Canada is a signatory.

Expansion, decommissioning or abandonment of an existing facility or infrastructure in, or with potential effects on, a

i. National Park,
ii. National Park Reserve,
iii. National Wildlife Area,
iv. Migratory Bird Sanctuary,
v. National Marine Conservation Area,
vi. Marine Protected Area, or
vii. Any other ecologically significant area identified pursuant to an international treaty to which Canada is a signatory.

Generating Facility

2 The construction, operation, decommissioning and abandonment of

a. a new fossil fuel-fired electrical generating facility with a production capacity of 200 MW or more;
b. a new in-stream tidal power generating facility with a production capacity of 50 MW or more or a new tidal power generating facility, other than an in-stream tidal power generating facility, with a production capacity of 5 MW or more; or
c. a new hydroelectric generating facility with a production capacity of 200 MW or more.

The construction and operation of a new:

i. fossil fuel-fired electrical generating facility with a production capacity of 10 MW or more
ii. in-stream tidal power generating facility with a production capacity of 50 MW or more or a new tidal power generating facility, other than an in-stream tidal power generating facility, with a production capacity of 5 MW or more; or
iii. hydroelectric generating facility with a production capacity of 10 MW or more.

The expansion, decommissioning or abandonment of an existing:

i. fossil fuel-fired electrical generating facility with a production capacity of 10 MW or more
ii. in-stream tidal power generating facility with a production capacity of 50 MW or more or a new tidal power generating facility, other than an in-stream tidal power generating facility, with a production capacity of 5 MW or more; or
iii. hydroelectric generating facility with a production capacity of 10 MW or more.

Dam, Water Diversion

6 The construction, operation, decommissioning and abandonment of a new structure for the diversion of 10 000 000 m3/year or more of water from a natural water body into another natural water body.

7 The expansion of an existing structure for the diversion of water from a natural water body into another natural water body that would result in an increase in diversion capacity of 50% or more and a total diversion capacity of 10 000 000 m3/year or more.

The construction and operation of a new structure to divert water from a natural water body.

The expansion, decommissioning or abandonment of an existing structure to divert water from a natural water body.

The construction and operation of any new structure, to divert water from a natural water body.

The expansion, decommissioning or abandonment of an existing structure, to divert water, including water bodies such as channels.

Mines and Quarries

16 The construction, operation, decommissioning and abandonment of a new
(g) stone quarry or sand or gravel pit, with a production capacity of 3 500 000 t/year or more.

17 The expansion of an existing
(g) stone quarry or sand or gravel pit that would result in an increase in the area of mine operations of 50% or more and a total production capacity of 3 500 000 t/year or more.

The construction and operation of any new stone quarry or sand/gravel pit, with a production capacity of 1 000 000 t/year or more.

The expansion, decommissioning or abandonment of an existing stone quarry or sand/gravel pit, with a production capacity of 1 000 000 t/year or more.

Military

18 The construction and operation of a new military base or military station that is to be established for more than 12 consecutive months.

19 The construction, operation, decommissioning and abandonment outside an existing military base of a new military training area, range or test establishment for training or weapons testing that is to be established for more than 12 consecutive months.

20 The expansion of an existing military base or military station that would result in an increase in the area of the military base or military station of 50% or more.

21 The decommissioning and abandonment of an existing military base or military station.

23 The low-level flying of military fixed-wing jet aircraft for more than 150 days in a calendar year as part of a training program at an altitude below 330 m above ground level on a route or in an area that was not established before October 7, 1994 by or under the authority of the Minister of National Defense or the Chief of the Defense Staff as a route or area set aside for low-level flying training.

Construction and operation of a new military base or military station.

Expansion, decommissioning or abandonment of an existing military base or military station.

The construction and operation of new military training area, range or test establishment for training or weapons testing that is outside an existing military base and is to be established for more than 12 consecutive months.

The expansion, decommissioning or abandonment of an existing military training area, range or test establishment for training or weapons testing that is outside an existing military base and is to be established for more than 12 consecutive months.

Low level flying exercises that are a part of a new training program.

Marine Infrastructure

24 The construction, operation, decommissioning and abandonment of a new
(c) marine terminal designed to handle ships larger than 25 000 DWT unless the terminal is located on lands that are routinely and have been historically used as a marine terminal or that are designated for such use in a land-use plan that has been the subject of public consultation. Construction and operation of a new marine terminal or port facility.

Expansion, decommissioning or abandonment of an existing marine terminal or port facility.

Railway

25 The construction, operation, decommissioning and abandonment of a new

(a) railway line that requires a total of 32 km or more of new right of way;

(b) railway yard with seven or more yard tracks or a total track length of 20 km or more;

(d) railway line designed for trains that have an average speed of 200 km/h or more. Construction and operation of a new railway terminal or railway line.

Significant expansion in the rail traffic at an existing terminal or railway line.

Proposed initiation of loading or unloading of toxic substances or dangerous goods at a railway terminal.

Proposed initiation of carriage of toxic substances or dangerous goods on a railway line.

Road Infrastructure

25 The construction, operation, decommissioning and abandonment of a new
(c) all-season public highway that requires a total of 50 km or more of new right of way; Construction and operation of a new road longer than 500 metres on federal lands.

Expansion, including widening, of an existing road longer than 500 metres on federal lands.

Construction and operation of a new all-season public highway that requires a total of 50 km or more of new right of way.

Airport

26 The construction, operation, decommissioning and abandonment of a new
(a) aerodrome located within the built-up area of a city or town;
(b) airport, as defined in subsection 3(1) of the Aeronautics Act; or
(c) all-season runway with a length of 1 500 m or more.

Construction and operation of a new airport or aeronautic facility.

Expansion, decommissioning or abandonment of an existing airport or aeronautic facility.

Nuclear

35 The construction, operation and decommissioning of a new nuclear fission or fusion reactor. Construction and operation of a new nuclear fusion or fission reactor, including Small Modular Reactors.

Expansion, refurbishment, life-extension, recommissioning or abandonment of an existing nuclear fusion or fission reactor, including Small Modular Reactors.

36 The expansion of an existing nuclear fission or fusion reactor that would result in an increase in power output of 50% or more.

The construction and operation of a new:

i. facility for the storage of irradiated fuel or nuclear waste;
ii. facility for the long-term management or disposal of irradiated fuel or nuclear waste.

The expansion, decommissioning or abandonment of an existing:

iii. facility for the storage of irradiated fuel or nuclear waste;
iv. facility for the long-term management or disposal of irradiated fuel or nuclear waste.

Electricity Transmission

39 The construction, operation, decommissioning and abandonment of a new electrical transmission line with a voltage of 345 kV or more that requires a total of 75 km or more of new right of way.

Construction and operation of a new electrical transmission line longer than 10 km, or expansion of an existing electrical transmission line by more than 10 km.

Decommissioning or abandonment of an electrical transmission line longer than 10km.

Pipeline

46 The construction and operation of a new pipeline, other than an offshore pipeline, with a length of 40 km or more.

Construction and operation of a new oil, gas, or commodity pipeline with a length of 40 km or more.

Expansion, decommissioning or abandonment of an existing oil, gas, or commodity pipeline with a length of 40 km or more.

C. CEAA 2012 Listings to Retain

Note: Entries' numbers correspond to those in the current Regulations Designating Physical Activities, SOR/2012-147.

Entries Based on Characterization of a Project's Purpose

Electricity Generating Facility

3. The expansion of

(a) an existing fossil fuel-fired electrical generating facility that would result in an increase in production capacity of 50% or more and a total production capacity of 200 MW or more;

(b) an existing in-stream tidal power generating facility that would result in an increase in production capacity of 50% or more and a total production capacity of 50 MW or more or an existing tidal power generating facility, other than an in-stream tidal power generating facility, that would result in an increase in production capacity of 50% or more and a total production capacity of 5 MW or more; or

(c) an existing hydroelectric generating facility that would result in an increase in production capacity of 50% or more and a total production capacity of 200 MW or more.

Dam, Water Diversion

4. The construction, operation, decommissioning and abandonment of a new dam or dyke that would result in the creation of a reservoir with a surface area that would exceed the annual mean surface area of a natural water body by 1 500 ha or more.

5. The expansion of an existing dam or dyke that would result in an increase in the surface area of the existing reservoir of 50% or more and an increase of 1 500 ha or more in the annual mean surface area of the existing reservoir.

Oil Sands

8. The construction, operation, decommissioning and abandonment of a new oil sands mine with a bitumen production capacity of 10 000 m3/day or more.

9. The expansion of an existing oil sands mine that would result in an increase in the area of mine operations of 50% or more and a total bitumen production capacity of 10 000m3/day or more.

Offshore Oil and Gas

10. The drilling, testing and abandonment of offshore exploratory wells in the first drilling program in an area set out in one or more exploration licenses issued in accordance with the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act or the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act.*

11. The construction, installation and operation of a new offshore floating or fixed platform, vessel or artificial island used for the production of oil or gas.

12. The decommissioning and abandonment of an existing offshore floating or fixed platform, vessel or artificial island used for the production of oil or gas that is proposed to be disposed of or abandoned offshore or converted on site to another role.

13. The construction, operation, decommissioning and abandonment of a new offshore oil and gas pipeline, other than a flowline.

Petroleum Refining and Storage

14. The construction, operation, decommissioning and abandonment of a new

(a) oil refinery, including a heavy oil upgrader, with an input capacity if 10 000 m3/day or more;

(b) facility for the production of liquid petroleum products from coal with a production capacity of 2 000 m3/day;

(c) sour gas processing facility with a sulphur inlet capacity of 2 000 t/day or more;

(d) facility for the liquefaction, storage or regasification of liquefied natural gas, with a liquefied natural gas processing capacity of 3 000 t/day or more or a liquefied natural gas storage capacity of 55 000 t or more;

(e) petroleum storage facility with a storage capacity of 500 000 m3 or more; or

(f) liquefied petroleum gas storage facility with a storage capacity of 100 000 m3 or more.

15. The expansion of an existing

(a) oil refinery, including a heavy oil upgrader, that would result in an increase in input capacity of 50% or more and a total input capacity of 10 000 m3/day or more;

(b) facility for the production of liquid petroleum products from coal that would result in an increase in production capacity of 50% or more and a total production capacity of 2 000 m3/day or more;

(c) sour gas processing facility that would result in an increase in sulphur inlet capacity of 50% or more and a total sulphur inlet capacity of 2 000 t/day or more;

(d) facility for the liquefaction, storage or regasification of liquefied natural gas that would result in an increase in the liquefied natural gas processing or storage capacity of 50% or more and a total liquefied natural gas processing capacity of 3 000 t/day or more or a total liquefied natural gas storage capacity of 55 000 t or more, as the case may be;

(e) petroleum storage facility that would result in an increase in storage capacity of 50% or more and a total storage capacity of 500 000 m3 or more; or

(f) liquefied petroleum gas storage facility that would result in an increase in storage capacity of 50% or more and a total storage capacity of 100 000 m3 or more.

Mine, Processing and Storage

16 The construction, operation, decommissioning and abandonment of a new

(a) metal mine, other than a rare earth element mine or gold mine, with an ore production capacity of 3 000 t/day or more;

(b) metal mill with an ore input capacity of 4 000 t/day or more;

(c) rare earth element mine or gold mine, other than a placer mine, with an ore production capacity of 600 t/day or more;

(d) coal mine with a coal production capacity of 3 000 t/day or more;

(e) diamond mine with an ore production capacity of 3 000 t/day or more;

(f) apatite mine with an ore production capacity of 3 000 t/day or more; or

17 The expansion of an existing

(a) metal mine, other than a rare earth element mine or gold mine, that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 3 000 t/day or more;

(b) metal mill that would result in an increase in the area of mine operations of 50% or more and a total ore input capacity of 4 000 t/day or more;

(c) rare earth element mine or gold mine, other than a placer mine, that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 600 t/day or more;

(d) coal mine that would result in an increase in the area of mine operations of 50% or more and a total coal production capacity of 3 000 t/day or more;

(e) diamond mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 3 000 t/day or more;

(f) apatite mine that would result in an increase in the area of mine operations of 50% or more and a total ore production capacity of 3 000 t/day or more; or …

Military

22 The testing of military weapons for more than five days in a calendar year in an area other than the training areas, ranges and test establishments established before October 7, 1994 by or under the authority of the Minister of National Defence for the testing of weapons.

Marine Infrastructure

24 The construction, operation, decommissioning and abandonment of a new

(a) canal or a lock or associated structure to control water levels in the canal;

(b) lock or associated structure to control water levels in existing navigable waterways; or

27 The extension of an existing all-season runway by 1 500 m or more.

28 The construction, operation, decommissioning and abandonment of a new

(a) international or interprovincial bridge or tunnel; or

(b) bridge over the St. Lawrence Seaway.

Hazardous Waste

29 The construction, operation, decommissioning and abandonment of a new facility used exclusively for the treatment, incineration, disposal or recycling of hazardous waste.

30 The expansion of an existing facility used exclusively for the treatment, incineration, disposal or recycling of hazardous waste that would result in an increase in hazardous waste input capacity of 50% or more.

Nuclear

31 The construction, operation and decommissioning of a new uranium mine or uranium mill on a site that is not within the licensed boundaries of an existing uranium mine or uranium mill.

32 The expansion of an existing uranium mine or uranium mill that would result in an increase in the area of mine operations of 50% or more.

33 The construction, operation and decommissioning of a new

(a) facility for the processing, reprocessing or separation of an isotope of uranium, thorium, or plutonium, with a production capacity of 100 t/year or more;

(b) facility for the manufacture of a product derived from uranium, thorium or plutonium, with a production capacity of 100 t/year or more; or

(c) facility for the processing or use, in a quantity greater than 1015 Bq per calendar year, of nuclear substances with a half-life greater than one year, other than uranium, thorium or plutonium.

34 The expansion of an existing

(a) facility for the processing, reprocessing or separation of an isotope of uranium, thorium or plutonium that would result in an increase in production capacity of 50% or more and a total production capacity of 100 t/year or more;

(b) facility for the manufacture of a product derived from uranium, thorium or plutonium that would result in an increase in production capacity of 50% or more and a total production capacity of 100 t/year or more; or

(c) facility for the processing or use, in a quantity greater than 1015 Bq per calendar year, of nuclear substances with a half-life greater than one year, other than uranium, thorium or plutonium, that would result in an increase in processing capacity of 50% or more.

37 The construction and operation of a new

(a) facility for the storage of irradiated fuel or nuclear waste, on a site that is not within the licensed perimeter of an existing nuclear facility; or

(b) facility for the long-term management or disposal of irradiated fuel or nuclear waste.

38 The expansion of an existing facility for the long-term management or disposal of irradiated fuel or nuclear waste that would result in an increase in the area, at ground level, of the facility of 50% or more.

Offshore Oil and Gas

40 The drilling, testing and abandonment of offshore exploratory wells in the first drilling program in an area set out in one or more exploration licenses issued in accordance with the *Canada Petroleum Resources Act.*

41 The construction, installation and operation of a new offshore floating or fixed platform, vessel or artificial island used for the production of oil or gas.

42 The decommissioning and abandonment of an existing offshore floating or fixed platform, vessel or artificial island used for the production of oil or gas that is proposed to be disposed of or abandoned offshore or converted on site to another role.

43 The construction, operation, decommissioning and abandonment of a new offshore pipeline, other than a flowline.

Petroleum Refining and Storage

44 The construction, operation, decommissioning and abandonment of a new

(a) sour gas processing facility with a sulphur inlet capacity of 2 000 t/day or more; or

(b) petroleum storage facility with a storage capacity of 500 000 m3 or more.

45 The expansion of an existing

(a) sour gas processing facility that would result in an increase in sulphur inlet capacity of 50% or more and a total sulphur inlet capacity of 2 000 t/day or more; or

(b) petroleum storage facility that would result in an increase in storage capacity of 50% or more and a total storage capacity of 500 000 m3 or more.

Pipeline

47 The decommissioning and abandonment of an existing pipeline, other than an offshore pipeline, if at least 40 km of pipe is removed from the ground.

Sustainability Provisions

Factors to consider

The IRTM Regulations should require the Agency to include the following information requirements in the tailored impact statement guidelines:

1. Information respecting the ecological basis for the meaningful exercise of Aboriginal and treaty rights and community health, and impacts on that basis;
2. The climate-specific information described below;
3. Information respecting baseline social conditions of potentially affected people, and potential positive and negative impacts on those conditions, including:
    a. way of life (how they live, work, play and interact with one another on a day-to-day basis),
    b. culture (shared beliefs, customs, values and language or dialect),
    c. community (cohesion, stability, character, services and facilities),
    d. political systems (the extent to which people are able to participate in decisions that affect them, and democratization taking place and resources provided for that purpose),
    e. environment from a community perspective (quality of air and water people use; availability and quality of food; level of hazard or risk, dust and noise the public is exposed to; adequacy of sanitation, physical safety, and access to and control over resources),
    f. personal and property rights (whether people are economically affected, or experience personal disadvantage which may include a violation of civil liberties),
    g. the public's fears and aspirations (perceptions about safety, fears about the future of communities, and aspirations for their future and the future of their children);
4. Information respecting positive and negative impacts on the physical, mental, social and spiritual health and wellbeing of potentially affected people, especially vulnerable populations;
5. Information respecting the economic baseline of affected people, communities and regions, and potential positive and negative effects on those people, communities and regions, including:
    a. Projected economic stability over the short, mid and long-term, and
    b. Potential for "boom and bust" cycles, and the degree to which the project and alternatives contribute to or mitigate that risk;
6. Information respecting the employment baseline of affected communities and regions, and potential positive and negative effects on employment, including:
    a. Number of permanent and temporary jobs,
    b. Varity of employment options by job type and sector,
    c. Workplace diversity and inclusion,
    d. Wage and benefit data by job type, sector, and identity factors,
    e. Workplace safety,
    f. Job security, and
    g. Whether the employment is viable in a Paris-compliant future;
7. Information respecting whether any community or generation will bear a disproportionate share of the impacts, or enjoy a disproportionate share of the benefits; and

60 From International Association for Impact Assessment, "Social Impact Assessment", online: http://www.iaia.org/wiki-details.php?ID=23.

8. Information respecting resource maintenance and efficiency, including:
    a. Waste and energy use options that are technically feasible,
    b. Impacts on future generations' ability to access resources,
    c. Whether the option places mitigation responsibilities on future generations, and
    d. Options to maximize resource and energy efficiency;
9. The interactions of the above effects; and
10. Consistency of the project and alternatives with relevant environmental policies, plans and programs.

Decision criteria

1. Taking into consideration the factors set out in section 22 of the Act and those listed above, including interactive effects, and applying the precautionary principle, the Agency or review panel, as the case may be, and the Minister or Cabinet, as the case may be, must:
    a. identify which option from among the proposal and alternatives makes the greatest positive contribution to sustainability by protecting, restoring or enhancing each of the following to achieve mutually reinforcing, cumulative and lasting sustainability gains:
        i. ecological integrity, including the ecological basis for the meaningful exercise of Aboriginal and treaty rights and community health,
        ii. the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change,
        iii. the community and social well-being of potentially affected people,
        iv. the health of potentially affected people, especially vulnerable populations,
        v. long-term economic wellbeing,
        vi. livelihood sufficiency and opportunity over the short and long-term,
        vii. intra-generational equity,
        viii. inter-generational equity,
        ix. resource maintenance and efficiency, and
        x. any additional criteria established by the Agency in accordance with section (x) of this Regulation; and
    b. uphold Indigenous jurisdiction, law and rights in accordance with the United Nations Declaration on the Rights of Indigenous Peoples.
2. Decisions on project assessments under section 1 must be consistent with the outcomes of any regional or strategic assessment conducted under sections 92, 93 or 95 of the Act.
3. Decisions must be based on a precautionary approach for avoiding risks.
4. The proponent bears the burden of proof in demonstrating, based on clear and convincing evidence, that the criteria set out in sections 1(a) and 2 have been met, or if trade-offs are anticipated, that the circumstances set out in section 4 are present.

Trade-off rules

5. Where no available option meets the criteria listed in section 1(a), the Minister or Cabinet, as the case may be, may approve an option if satisfied that it:
    a. will maximize net gains to overall sustainability based on the criteria identified in paragraph 1(a), even if not every criterion is met;
    b. is not likely to result in the exceedance of an ecological limit;
    c. complies with sections 1(b) and 2;
    d. will not displace a significant adverse effect to future generations (unless all other options are worse for the future); and
    e. is consistent with any additional trade-off rules established in policy or an assessment plan.

Reasons

5. A decision to approve an option under sections 1 or 4 must be accompanied by explicit, clear and cogent reasons demonstrating:
    a. how the option best contributes to overall sustainability compared to the alternatives in accordance with the criteria listed in section 1(a);
    b. how the option complies with sections 1(b) and 2;
    c. how the decision reflects efforts to avoid trade-offs;
    d. if applicable, how trade-offs have been considered, addressed and justified;
    e. how the decision is based on the meaningful engagement of all jurisdictions, rights-holders and stakeholders as set out in section (z); and
    f. disclosure of the evidence upon which the decision is based.

Definitions

Cumulative effects: The synergistic, interactive, or unpredictable outcomes of projects, past, present and future, combined with land use practices and climate change that aggregate over time and space, and that result in significant consequences for people and the environment

Ecological integrity: The biological richness and the ecosystem services provided by natural terrestrial and marine processes, sustained at all scales through time (e.g., species richness, vegetation diversity, soil productivity, water quality, predator–prey interactions, nutrient cycling, hydrology, disturbance regimes, succession, carbon storage), including the structure, function, and composition of natural ecosystems.

Inter-generational equity: The equal preservation or enhancement of the ability of current and future generations to benefit from environmental, social, cultural, health and economic well-being in potentially affected areas.

Intra-generational equity: Enhancement of fairness in the distribution of benefits, effects, risks and uncertainties, as well as choice availability, among potentially affected individuals, communities, regions and other interests.

Resource maintenance and efficiency: Reducing extractive damage, avoiding waste and minimizing overall material and energy use.

Public Participation Principles

1. Participation must begin early in the decision process, be meaningful, and designed to build public confidence;
2. Public input must be able to influence or change the outcome or undertaking being considered in the assessment;
3. Opportunities for public comment must be open to all interested parties, be varied and flexible, include openings for face-to-face discussions, and include involving the public in the actual design of an appropriate participation program;
4. Formal processes of engagement, such as hearings and dispute resolution processes, must be specified, and implemented according to principles of natural justice and procedural fairness;
5. Adequate and appropriate notice must be provided;
6. Ready access to information and all decisions must be made available, including in local languages, in a manner that they may be easily read and understood in affected communities;
7. Participant assistance and capacity building must be made readily available and accessible in order to support informed dialogue and discussion;
8. Participation programs must be learning-oriented;
9. Participation programs must be designed to recognize the knowledge and acumen of the public; and
10. Participation processes must be fair, open and transparent, and designed to secure the public's acceptance of decisions.

Climate Framework Test

To be approved, proposed projects or alternatives should demonstrate that they are the best option for:

- contributing to the sectoral transformations that are needed to achieve GHG neutrality in Canada in time to meet our international commitments;
- avoiding any direct or indirect effects that would hinder timely transition to GHG-neutrality;
- fitting on a credible sectoral or regional pathway to meeting Canada's international commitments;
- staying within regional or sectoral carbon budgets, as well as a national carbon budget based on Canada's fair share of GHG reductions;
- avoiding or compensating for any addition to the costs of making a timely transition to GHG-neutrality;
- avoiding any GHG emissions or sink impairments past the Canadian deadline for GHG-neutrality, or provide legitimate new domestic offsets to neutralize any such emissions or sink impairments;
- ensuring that Canadian GHG mitigation and sink enhancement initiatives reflect "highest possible ambition" and best efforts, while not impeding or delaying more promising options
- ensuring Canada meets its Nationally Determined Contributions (NDC), plus any additional requirements to address the gap between the current NDC and the more demanding commitments of the Paris Agreement, and to anticipate needs for increasing ambitions in future national commitments under that Agreement; and
- being consistent with the requirements implied by the Pan-Canadian Framework on Clean Growth and Climate Change and its implementing legislation, plus additional requirements to address the gap between the Framework components and the current NDC, as well as the gap between the current NDC and the Paris Agreement.

Additionally, a project or alternative should only be approved if it is demonstrated to be viable if the proponent were required to pay the full costs associated with all lifecycle GHG emissions and sink impairments properly attributable to the project over its lifespan, with these full costs determined by the GHG price needed to achieve timely transition to a GHG-neutral economy or the full social cost of associated climate change (the share of overall anticipated global damages attributable to the undertaking's GHGs). Where economic benefits are related to exports made possible by the projects, these must be based on market analysis consistent with Paris compliant demand scenarios.

61 The Paris Agreement allows for internationally transferred mitigation outcomes through cooperation but international offsets should be considered only after robust methodologies and governance systems have been developed.

Scope of Information Requirements under U.S. National Environmental Policy Act[62]

Three types of environmental effects required to be considered by US federal agencies	
Direct effects	Those that are "caused by the action and occur at the same time and place."
Indirect effects	Those that are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable," and which may include "growth inducing effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."
Cumulative effects	Those that result from "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions."
Three types of related actions with significant impact on the environment	
Connected actions	Actions that are "closely related and therefore should be discussed in the same impact statements." Executive guidance on these general regulations were provided by the Council on Environmental Quality under the Obama administration in August 2016 specified that connected actions are those 'subject to reasonable limits based on feasibility and practicality," including activities "that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for a proposed agency action or as a consequence of a proposed agency action (including land clearing, access roads, extraction, transport, refining, processing, using the resource, disassembly, disposal, and reclamation)."
Cumulative actions	Actions that "have cumulatively significant impacts and should therefore be discussed in the same impact statement."
Similar actions	Actions that "have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography."

62 42 U.S.C. §4321 et seq. (1969) and Regulation.

63 43 FR 56003, Nov. 29, 1978, sec. 1508.8 (a).

64 43 FR 56003, Nov. 29, 1978, sec. 1508.8 (b).

65 43 FR 56003, Nov. 29, 1978, sec. 1508.7.

66 43 FR 56003, Nov. 29, 1978, sec. 1508.25 (a) 1.

67 Center for Environmental Quality (August 1, 2016), Final guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews at p.13-14, online: <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf>.

68 43 FR 56003, Nov. 29, 1978, sec. 1508.25 (a) 2.

69 43 FR 56003, Nov. 29, 1978, sec. 1508.25 (a) 3.