

Federal Environmental Assessment Reform: Assessing the Cumulative Effects of Human Development and Aligning with Canada's Climate Change Commitments

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Introduction and Overview

The recent *Paris Climate Change Agreement* (2015) represents the latest global commitment to reducing greenhouse gas emissions in order to prevent the harmful effects of climate change. The *Paris Climate Change Agreement* is at least the fifth in a series of United Nations agreements of this nature.¹ Historically, many countries, including Canada, have over-promised and under-delivered with regards to their climate commitments under these agreements.² However, the scientific community has never been more certain, and the general public more accepting, of the immediate need for significant climate action. As stated by the Intergovernmental Panel on Climate Change (IPCC), “ignorance can no longer be an excuse for tergiversation.”³

Under the *Paris Climate Change Agreement*, the federal government has agreed that Canada will reduce its national greenhouse gas emissions to 30% below 2005 levels by the year 2030.⁴ Furthermore, Canada has ambitiously agreed to pursue efforts to

¹ UNFCCC, *Towards a Climate Agreement* (2016). online: UN and Climate Change <<http://www.un.org/climatechange/towards-a-climate-agreement/>>

Note: Previous agreements include

- The Rio Convention (1992)
- The Kyoto Protocol (1997)
- The Copenhagen Accord (2009)
- The Cancun Agreement (2010)
- The Doha Amendment to the Kyoto Protocol (2012)

² Jeffery Simpson, “Canada’s message: The World and its Climate be Damned” *The Globe and Mail* (17 December 2011) online: < <http://www.theglobeandmail.com/opinion/canadas-message-the-world-and-its-climate-be-damned/article4403806/>>

³ Intergovernmental Panel on Climate Change, *Climate Change 2014: Synthesis Report* (2014). Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland.

⁴ Anthony Ho and Chris Tollefson, “Sustainability-based Assessment of Project-related Climate Change

limit the average global temperature increase to 1.5 degrees Celsius above pre-industrial levels.⁵ This target is below the 2-degree threshold that the IPCC determined was key to limiting the risk of serious consequences, such as the increased frequency of extreme climate events.⁶ Our emission targets do not have to be unrealistic aspirations, nor should they be a meaningless attempt to placate the public in the face of our imminent fate. Now that the federal government has committed to these ambitious targets, there is an urgent need for vigorous policy, legislative, and regulatory action in order to restore the trust of all Canadians and the global community.⁷

The current *Canadian Environmental Assessment Act* (CEAA 2012) does very little to assess greenhouse gas emissions. In fact, climate change was a blind spot in the federal environmental assessment legislation even before Canada's environmental laws took a few steps backward in 2012.⁸ Canada's environmental assessment legislation should be one of many tools that help to ensure that Canada is on track to meeting its environmental commitments.

Similarly, the cumulative environmental effects of development have not been adequately assessed since CEAA 2012 came into force.⁹ While section 19(1)(a) of CEAA 2012 suggests that cumulative environmental effects are a factor to be considered in the environmental assessment of a designated project;¹⁰ section 19(2) states that the scope of the factors to be considered is to be determined by the responsible authority, or the Minister (if the environmental assessment is referred to a review panel).¹¹ In other words, the scope of the factors to be considered is completely discretionary, and

Impacts: A Next Generation EA Policy Conundrum" *SSRN* (2 September 2016) online: <<https://ssrn.com/abstract=2840021>>

⁵ Government of Canada, *Canada's Way Forward on Climate Change* (2016) online: <<http://www.climatechange.gc.ca/default.asp?lang=En&n=24700154-1>> accessed 18 November 2016.

⁶ Intergovernmental Panel on Climate Change, *supra* note 3.

⁷ Paul Boothe and Félix-A. Boudreaut, *By the Numbers: Canada's GHG Emissions* (Lawrence National Centre for Policy and Management: Ivey School of Business at Western University, 2016) online: <<http://www.ivey.uwo.ca/cmsmedia/2112500/4462-ghg-emissions-report-v03f.pdf>>

⁸ Meinhard Doelle, "CEAA 2012: The End of Federal EA As We Know It?" (2012) 24 *J Environmental Law & Practice* 1.

⁹ Aerin Jacob, Caroline Fox, Travis G. Gerwing et al., *Open Letter to Prime Minister Justin Trudeau*, (Early Career Researchers, 2016) online: <<http://www.youngresearchersopenletter.org>>

¹⁰ Canadian Environmental Assessment Act, SC 2012, c 19, s. 19(1)(a).

¹¹ Canadian Environmental Assessment Act, SC 2012, c 19, s. 19(2).

decision makers can determine that cumulative effects are an irrelevant consideration. That being said, I acknowledge that it can be difficult to accurately assess cumulative environmental effects at the project-level. The cumulative effects of human development can create broad implications for ecosystems, which cannot always be traced back to a single project. Especially when considering the complex and trans-boundary issue of climate change, project level environmental assessments alone are not enough to assess whether human development activities are aligned with Canada's ability to meet its greenhouse gas reduction targets.¹²

One of the stated purposes of CEEA 2012 is to “protect the *components* of the environment that are within the legislative authority of Parliament from *significant* adverse environmental effects caused by a *designated project*.”¹³ In other words, the federal government will make a limited effort to make sure the harmful environmental effects of a specific project aren't as bad as they could be. This purpose is hardly aligned with the net positive goals of sustainability, or the aspirations Canada has set for itself in terms of emissions reductions and environmental leadership. Now is the time to completely reimagine how environmental assessment is conducted in this country, and to set a leading example for the rest of the world.

Themes and Issues

In this submission I will make recommendations to the Panel relating to “Planning Environmental Assessment” and “Environmental Assessment in Context,” which are two of the themes that were suggested to guide the Panel's review.¹⁴ In particular, my submission will focus on the following three questions:

- Under which circumstances should environmental assessment be undertaken at the regional, strategic or project-level?

¹² Ho and Tollefson, *supra* note 4.

¹³ Canadian Environmental Assessment Act, SC 2012, c 19, s. 4(1)(a).

¹⁴ Expert Panel Review of Environmental Assessment Processes, *Suggested Themes for Discussion* (2016) online: <<http://eareview-examenee.ca/participate/suggested-themes-for-discussion/>>

- What types of information should inform environmental assessment decisions?
- How should federal environmental assessment processes address the Government of Canada's international and national environmental and social commitments, such as sustainable economic growth and addressing climate change?

Recommendations and Discussion

Recommendation 1: Mandated Regional and Strategic Environmental Assessments

Under section 73 of CEAA 2012, the Minister *may* establish a committee to conduct a study of the effects of existing or future physical activities carried out in a region that is entirely on federal lands. If the region in question is not entirely on federal lands, the Minister *may* enter into an agreement with another jurisdiction to complete the regional assessment.¹⁵ Since the decision to conduct regional assessments is purely discretionary, the use of regional assessments in Canada has been very limited to date.

I recommend that conducting regional and strategic assessments should become the primary role of the Canadian Environmental Assessment Agency. Smaller project-level assessments and approvals, while informed by these regional and strategic assessments, should be delegated to provincial decision makers to the extent possible. This aligns with one of the themes that emerged from the *Federal Environmental Assessment Reform Summit* that was hosted by West Coast Environmental Law in May 2016, which suggested that “assessments [should] occur at the regional, strategic, and project levels, and each of those levels [should] inform the other.”¹⁶ In addition to allowing for a meaningful consideration of cumulative effects and climate change impacts, this approach would have other major benefits. If legislation across provincial

¹⁵ Canadian Environmental Assessment Act, SC 2012, c 19, s. 73(1).

¹⁶ Anna Johnston, *Federal Environmental Assessment Reform Summit Proceedings* (West Coast Environmental Law, 2016) online: <
http://wcel.org/sites/default/files/publications/WCEL_FedEnviroAssess_proceedings_fnl.pdf>

jurisdictions were coordinated to require for project-level assessments to be informed by the findings of regional and strategic assessments conducted under federal legislation, the regime would be less susceptible to change based on the political whims of the day; thus, making long term objectives more attainable. This approach would also appeal to industry in that these co-operative efforts between jurisdictions would result, essentially, in a “one project, one review” model.

‘Regional Assessment’ is not defined in CEAA 2012. The Canadian Council of Ministers of the Environment (CCME) defined Regional Strategic Environmental Assessment as “a process designed to systemically assess the potential environmental effects, including cumulative effects, of strategic initiatives, policies, plans or programs for a particular region.”¹⁷ I would suggest that “major projects” should also be included in this definition.

I endorse Professor Martin Olszynski’s submission to this Panel that the best-case scenario would involve setting regional environmental assessment as the default under federal environmental assessment legislation.¹⁸ In this scenario, the entire country would be divided into environmentally significant regions¹⁹, and baseline environmental data, such as air quality, water quality, and biodiversity indicators, would be recorded for each region.²⁰ This approach would require significant government involvement, as it doesn’t make sense for any particular project proponent, or industry

¹⁷ Canadian Council of Ministers of the Environment, *Regional Strategic Environmental Assessment in Canada: Principles and Guidance* (CCME, 2009) online: <
http://www.ccme.ca/files/Resources/enviro_assessment/rsea_principles_guidance_e.pdf>

¹⁸ Martin Olszynski, “Avoiding the ‘Tyranny of Small Decisions’: A Canadian Environmental Assessment Regime for the 21st Century” (*Submission to Expert Panel Review of Environmental Assessment Processes*, 2016) online: < http://eareview-examenee.ca/wp-content/uploads/uploaded_files/ea_review_submissionolszynski_15nov16.pdf>

¹⁹ **Note:** This approach would create jurisdictional issues. I will defer to the suggestions from MacLean, Doelle, and Tollefson around a collaborative approach to environmental assessment among multiple jurisdictional actors. See: Jason MacLean, Meinhard Doelle, and Chris Tollefson, “Polyjural and Polycentric Sustainability Assessment: A Once in a Generation Law Reform Opportunity” *Forthcoming* (2016) 30:1 *Journal of Environmental Law and Practice*.

²⁰ **Note:** In some areas, it is likely that sustainability thresholds have already been surpassed. As such pre-industrial baselines should also be considered. In addition, natural cycles and variability should be accounted for.

more generally, to be fully responsible for conducting regional environmental assessments. Although this process would initially require a substantial investment, it would create efficiencies in that it would eliminate the redundant requirement for each proponent to gather this baseline information for every project.²¹ In order to decrease the burden on taxpayers, project proponents could pay a fee to access the federal database of information about regional environmental indicators, which would be necessary to conduct project-level assessments. A further benefit of this approach is that it would help to ensure the accuracy and reliability of scientific opinions, and the professional integrity of environmental scientists. If the Canadian Environmental Assessment Agency were in charge of commissioning the collection of this baseline data, it would help to address mounting concerns about the lack of independence and impartiality between project proponents and the environmental consulting firms that they hire.²²

If surveying the entire country turns out to be too ambitious an undertaking, an alternative would be to mandate regional assessments in areas of federal importance or jurisdiction. The CCME suggested that regional strategic environmental assessments might apply to developments and initiatives associated with marine and coastal areas; integrated land use planning; national parks and federal protected areas; watershed management; and regional energy strategies.²³ I also suggest that the following could be reasonably included on the list, based on the Constitutional division of powers: inland fisheries; lands reserved for First Nations and Aboriginal peoples; migratory bird routes; wildlife corridors for species at risk; and major, inter-provincial projects.²⁴

In jurisdictions such as Australia, regional and strategic assessments are conducted regularly. The Government of Australia has determined that it is appropriate to conduct strategic-level assessments in areas facing regional development pressures; for complex projects involving multiple stakeholders; and to address cumulative impacts

²¹ Olszynski, *supra* note 18.

²² Anne Casselman, "Who is Watching B.C.'s Environmental Watchdogs?" *B.C. Business Magazine* (14 July 2015) online: < <http://www.bcbusiness.ca/who-is-watching-bcs-environmental-watch-dogs>>

²³ Canadian Council of Ministers of the Environment, *supra* Note 17.

²⁴ Constitution Act, 1867, 30 & 31 Vict, c 3, s. 91

on matters of “national environmental significance” (i.e. world heritage sites, Ramsar wetlands, species at risk, migratory birds, marine areas, national parks, and nuclear energy).²⁵

In addition to assessing the cumulative environmental effects of existing and proposed policies or developments for a region, environmental assessments should also consider alternative future scenarios at the regional level.²⁶ Including alternative scenarios in regional environmental assessments would allow decision makers to envision possibilities beyond the proposed projects and plans; weighing the options in order to select the most sustainable path for a region’s development (or lack thereof).

Recommendation 2: Substantive Thresholds at the Regional Level

Scientific certainty is elusive. Ultimately, environmental science is merely a series of hypotheses to be tested through monitoring and experimentation.²⁷ Given this reality, environmental law has traditionally been more procedural than substantive. Its objective is to ensure that decisions are informed and fair, rather than necessarily correct. However, some would argue that the predisposition toward “process” has been taken too far, and environmental assessment has become nothing more than a meaningless information gathering exercise.²⁸ As Dan Tarlock pointed out, “there needs to be some legal drag on the amplitude of political oscillations. Otherwise, the environment simply becomes an equally weighted factor to be balanced against competing objectives e.g. to be ultimately ignored.”²⁹ We have seen this play out since

²⁵ Commonwealth of Australia, *A Guide to Undertaking Strategic Assessments* (Department of Sustainability, Environment, Water, Population and Communities, 2013) online: <https://www.environment.gov.au/system/files/resources/0896f6de-4473-4c0e-bb2a-1ceeae34867c/files/strategic-assessment-guide_1.pdf>

²⁶ Johnston, *supra* note 16.

²⁷ A. Dan Tarlock, “Is There a There There in Environmental Law?” (2004) 19 J Land Use & Envtl L 213.

²⁸ Martin Olszynski, “Environmental Laws as Decision-Making Processes (or, Why I am Grateful for Environmental Groups this Earth Day)” *ABLawg* (22 April 2015). online: <<http://ablawg.ca/2015/04/22/environmental-laws-as-decision-making-processes-or-why-i-am-grateful-for-environmental-groups-this-earth-day/>>

²⁹ Tarlock, *supra* note 27 at 221.

the implementation of CEAA 2012, when, despite findings of significant adverse environmental effects, projects were approved under section 52 because such effects were deemed to be “justified in the circumstances” by the Governor in Council.³⁰ In many cases, such as the case of Enbridge’s Northern Gateway Pipeline, the Governor in Council made this determination without providing any explanation or reasons.³¹

Another example of when certain environmental effects were overlooked was in the Federal Court of Appeal case, *Tsleil-Wautuh Nation v. National Energy Board* (2014). In this case the Tsleil-Nation appealed an order approving the assessment of the Trans Mountain Pipeline. The National Energy Board (NEB) found that the project was in Canada's public interest; despite the significant adverse impacts that were likely to result from increased marine shipping (oil export) activities, which could not be wholly mitigated. The aboriginal band argued that the NEB failed to include marine shipping activities in the scope of factors to be examined under section 19(1)(a) of *CEAA 2012*. The appeal was dismissed for a variety of reasons, including the fact that the band did not take advantage of the opportunity to raise their concerns before the administrative tribunal. The Court also acknowledged that the scope of factors to be considered in an environmental assessment may change over the course of a proceeding.³² In strategic and regional assessments, it should be mandatory to fully consider cumulative effects, and this should not be subject to change at the discretion of a decision maker.

I propose that it is possible to set substantive thresholds at the regional level for a number of environmental indicators, including air, water, and soil quality; as well as disturbance thresholds for wildlife. If a project, plan, or policy is expected to contribute to adverse environmental effects such that these thresholds would be surpassed, it should not be approved. In these circumstances, there should be no discretionary power granted for cumulative effects to be ignored, or for such effects to be deemed “justified in the circumstances.” Substantive thresholds would be beneficial for industry as well in

³⁰ Canadian Environmental Assessment Act, SC 2012, c 19, s. 52(4).

³¹ Martin Olszynski, “Federal Court of Appeal Reviews CEAA “Justification” Determination for Lower Churchill Falls” *ABLawg* (19 September 2014). online: <<http://ablawg.ca/2014/09/19/federal-court-of-appeal-reviews-ceaa-justification-determination-for-lower-churchill-falls/>>

³² *Tsleil-Wautuh Nation v. National Energy Board*, 2016 FCA 219, 2016 CarswellNat 4255.

that they would bring an added degree of certainty and predictability into project approval decisions. In addition, a prohibition on these significant adverse environmental effects from the outset might help protect industry from future liability for regulatory offences.

In Alberta, the provincial government has committed to completing seven regional plans under the province's land-use framework. These legally binding plans intend to assess and limit the cumulative effects of development activities on air, water, and biodiversity in a given region.³³ The first of these plans to be completed was the Lower Athabasca Regional Plan. This region covers 93,212 square kilometers of the province and is home to Alberta's oil sands. The plan has set specific surface water and air quality triggers and limits for the region; the Panel can look to the Lower Athabasca Regional Plan as a model for regional-level federal assessments in this regard.³⁴

In order to make approval decisions based on substantive thresholds, it is absolutely critical for the scientific data to be accurate and reliable. Implicitly, this means that the individuals and organizations collecting the data need to be competent and meticulous. Unlike other professions, environmental science is not heavily regulated. In fact, environmental scientists are not required to obtain professional certification, or to work under an experienced mentor.³⁵ In collaboration with the Canadian Environmental Certification Approvals Board, ECO Canada offers the only national environmental designation. Environmental scientists who have received a Canadian diploma or degree, and have at least five years of relevant work experience are eligible to obtain Environmental Professional Certification. The certification ensures that Environmental Professionals have met a standard of environmental skills and

³³ Alberta Environment and Parks, *Lower Athabasca Region* (2016) online:
<<https://landuse.alberta.ca/RegionalPlans/LowerAthabascaRegion/Pages/default.aspx>>

³⁴ Alberta Government, *Lower Athabasca Regional Plan 2012 – 2022* (2012) online:
<<https://landuse.alberta.ca/LandUse%20Documents/Lower%20Athabasca%20Regional%20Plan%202012-2022%20Approved%202012-08.pdf>>

³⁵ **Note:** My insights and recommendations in this area are based primarily on conversations I've had with environmental science consultants who I have personal relationships with.

knowledge; adhere to a professional code of ethics; and are committed to meeting ongoing professional development requirements.³⁶ In addition, ECO Canada offers an Environmental Professional in Training certification for entry-level professionals.³⁷ While these programs exist, there does not appear to be an incentive to obtain such certification under any provincial or federal legislation. As a result, junior employees who lack technical and scientific expertise are often responsible for gathering data and making final determinations as to the status of environmental indicators.³⁸ Federal environmental assessment legislation should require certified Environmental Professionals to oversee and uphold the scientific rigour of environmental data gathering processes. By signing off on environmental findings, professionals would be subject to some degree of accountability with regard to the accuracy and reliability of baseline, assessment, and monitoring data. Sanctions for professionals who do not adhere to the code of ethics, or who do not ensure the quality and accuracy of data, would be better left to the professional association or another regulatory body.

When scientific uncertainty impedes a finding as to whether or not environmental thresholds will be surpassed, the precautionary principle should be adhered to. The precautionary principle is widely recognized as a fundamental guidepost in environmental law. It suggests that: “where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.”³⁹ Applied in another way, the precautionary principle would ensure that, in the face of scientific uncertainty, the approval of an activity would be prohibited until there was strong enough data to predict how it would contribute to environmental thresholds.

³⁶ ECO Canada, *Environmental Professional (EP) Certification* (2016) online: <<http://www.eco.ca/certification/>>

³⁷ *Ibid.*

³⁸ *Supra* note 35.

³⁹ Jerry V. DeMarco, “Building a Strong Foundation for Action: A Review of Twelve Fundamental Principles of Environmental and Resource Management Legislation” (2008) 19.1 *Journal of Environmental Law and Practice* 59.

Recommendation 3: Regional Greenhouse Gas Targets and a Climate Test

In order to attain our climate target for 2030, Canada must reduce its national greenhouse gas emissions to 525 megatonnes.⁴⁰ The Lawrence National Centre for Policy and Management has calculated the aggregate total of the provincial greenhouse gas emission targets for 2030, and the sum is approximately 580 megatonnes.⁴¹ Therefore, even if all the provinces achieve their greenhouse gas reduction targets (as they are currently set), Canada would still fall approximately 55 megatonnes short of meeting its national target in 2030.⁴² This suggests that some, or all, of the provinces need to amend their climate change targets to meet the more rigorous national commitment. One way this gap might be addressed is through a concerted effort to reduce emissions regionally, particularly in areas of federal jurisdiction.

Federal environmental assessment legislation should contain criteria that helps decision makers determine the significance of greenhouse gas emissions from any given activity. Setting regional greenhouse gas targets would allow decision makers to conceptualize how a project or activity fits into the bigger picture of a region, and in turn, assess how it aligns with Canada's national climate change commitments.⁴³ Regional targets could be determined by calculating a fair distribution of benefits and burdens amongst each region, while also bearing in mind that certain regions contain more urban centres, or a higher potential for development activities, than others. Using regional targets as a measure of significance, a legislated climate test would ask: (1) Is the project, plan or strategy helping or hindering Canada's ability to meet its climate

⁴⁰ Boothe and Boudreaut, *supra* note 7.

⁴¹ **Note:** For provinces that have not announced targets, the Lawrence Centre for Policy and Management generally used the average level stringency of the announced targets to develop proxy 2030 targets. (Paul Boothe and Félix-A. Boudreaut, *supra* note 7).

⁴² Boothe and Boudreaut, *supra* note 7.

⁴³ Johnston, *supra* note 16.

commitments under international agreements? And (2) what is the degree to which it is helping or hindering?⁴⁴

A prime example of when a regional greenhouse gas target and climate test may have changed the outcome of an assessment is the recently approved Pacific North West liquefied natural gas project in British Columbia. While a condition on the approval was that yearly greenhouse gas emissions are to be capped at 4.3 million tonnes, reportedly this only applies to the project facility itself.⁴⁵ When considered on a regional level, additional emissions brought by upstream developments, including the production and transportation of natural gas, would bring the aggregate emissions related to this project to 10.5 million tonnes per year.⁴⁶ This is a huge contribution considering that British Columbia's emission target for 2050 is 13 million tonnes per year.⁴⁷

While greenhouse gas emissions will not be a significant factor for every project, incorporating greenhouse gas targets into regional assessments provides a larger, more effective means of ensuring that projects, plans, and strategies are not approved without considering whether or not they are aligned with Canada's ability to achieve its climate goals.

Summary and Conclusion

I appreciate this unique opportunity to share my thoughts and research on these topics. To be able to fully and directly participate, and contribute ideas toward a policy directive of this magnitude, is an example of democracy at its finest. I sincerely hope that this government continues to be open and transparent throughout this process, and embeds these same democratic values into the environmental assessment regime.

⁴⁴ *Ibid.*

⁴⁵ Jon Hernandez, "LNG mega-project incompatible with B.C.'s greenhouse gas target, says expert" *CBC News* (29 September 2016) online: <<http://www.cbc.ca/news/canada/british-columbia/lng-mega-project-incompatible-with-b-c-s-greenhouse-gas-target-says-expert-1.3782822>>

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

With this submission, I intended to contribute to the discussion around the themes of “Environmental Assessment in Context” and “Planning Environmental Assessment.”⁴⁸ The objective of my submission was to address how federal environmental assessment legislation should be reformed in order to be more comprehensive in terms of the assessment of cumulative effects and climate change considerations. In addressing these issues, I made three primary recommendations to the Panel. I recommended that federal environmental assessment legislation should (1) focus on mandatory strategic and regional environmental assessments; (2) require substantive thresholds to be set for environmental indicators at the regional level; and (3) require regional greenhouse gas targets to be established, which would inform a mandatory “climate test” consideration for project approvals.

I believe that incorporating amendments of this nature in to the legislation will ensure that the effect of the Act is truly to protect the environment, and to promote sustainable development. Assessing the cumulative effects and climate change contributions of projects, plans, and policies will be critical to not only to regaining the trust of Canadians and other global citizens, but more importantly, to preventing irreversible adverse impacts for people and ecosystems.⁴⁹

⁴⁸ Expert Panel Review of Environmental Assessment Processes, *supra* note 14.

⁴⁹ Intergovernmental Panel on Climate Change, *supra* note 3.