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Re: Environmental Assessment (EA) Engagement for modernizing EA in Nova Scotia

Dear Honorable Premier Houston, Honourable Minister Halman, MLA Lachance, and the EA Engagement Team,

Thank you for the opportunity to weigh in on the Government of Nova Scotia's commitment to modernize the environmental assessment (EA) process as defined in the *Environmental Goals and Climate Change Reduction Act*. Given that the last major update of existing regulations was in 2008, and we now have several years' experience with the federal *Impact Assessment Act (2019)*, it is an opportune time to align Nova Scotia's EA regulations with global and national best practice.

The lead authors and signatories represent academic, practitioner, and policy experts in EA and aligned disciplines from Dalhousie University and the University of King's College. We have past experiences as practitioners in EA in government, industry, and consulting roles. The lead authors are engaged directly in research on best practices for EA in the domains of cumulative effects, diversity, equity, and inclusion (DEI), scientific integrity, and water resource management. We also are grateful to the work of our late colleague Dr. Meinhard Doelle, a premier scholar at the Schulich School of Law in EA law and policy.

In this letter, we make targeted recommendations for modernized EA regulations in Nova Scotia. We provide comment on the areas identified for input by the Department of Environment and Climate Change: improving EA's incorporation of cumulative effects, independent review, Netukulimk (the Mi'kmaq concept of living sustainably on the land through respectful co-habitation), DEI, and climate change. We also identify areas where the regulations could be strengthened by upholding sufficient review timelines and processes, closing loopholes in the post-assessment phase, and adopting best practices for transparency. **At the conclusion of this letter, we provide a concise list of priority recommendations for EA modernization in Nova Scotia.**

CUMULATIVE IMPACTS

Cumulative effects assessment considers the potential for multiple impacts of a project (or projects) acting together at the broad spatial and temporal scales encompassing past, present, and

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future infrastructure development or land-use change. Cumulative effects impact both ecosystem resilience and human health and well-being. This is of particular concern in Nova Scotia, a province with one of the highest degrees of anthropogenic disturbance in Canada in terms of land use alteration and rising developmental pressure relating to an increasing population. For example, with current industrial focus on mobilization of ‘critical minerals’, mining claims are rapidly increasing [1], with expanding development expected to follow, adding to existing stressors on ecological and social well-being from other sectors.

In recent decades, many studies have noted that cumulative effects assessments at the scale of an individual project underestimate impacts, are overly narrow in scope, and are overwhelmingly ineffective [2]–[6]. Given the pervasive failure of project-level assessments to account for cumulative effects, we foremost recommend the Province lead land and water use planning at the scale of watersheds and/or ecodistricts [7]. While led by the provincial government, we recommend this planning be collaborative with Indigenous communities and representative organizations, municipalities, non-profits, federal departments and agencies, districts, and citizens.

Specific frameworks the Province can look to include the regional assessment framework under *IAA 2019* or joint land use plans between jurisdictions (e.g., Wóoshtin Yan TOO.AAT Land Use Plan established between the Taku River Tlingit First Nation and the Province of British Columbia). The intent should be to develop forward-looking planning processes that establish a collaborative conservation and long-term development vision for the area to avoid the pitfalls of single-project cumulative effect assessments [2], [8]. This approach is generally regarded as best practice for active (vs more passive) regulatory approaches to environmental management that enable adaptive management and encourage stakeholder participation before, during and after projects are developed [9].

Watershed or ecoregion-level committees should identify specific areas where certain developments pose risks that cannot be mitigated and are not in the public interest, and thus should not be permitted. This will require collaboration at provincial level within departments; an example is British Columbia’s Water Quality Objectives program, a collaboration of the province’s Environmental Assessment Office and other provincial departments with active planning and monitoring participation of Indigenous and non-Indigenous communities [10].

Finally, Terms of Reference, Impact Statement Guidelines, or similar documents should be prepared to guide proponents for *all* project types and classes, including the screening phase of Class I undertaking (for example, like the *IAA 2019*’s ‘Tailored Impact Statement Guidelines’). This will improve rigour and consistency of report information and give certainty for proponents in terms of knowing what information they must provide and collect. These include cumulative effects as a detailed prediction lens for every Valued Component [11] and not merely a short section stapled to the back of an impact statement.

DIVERSITY, EQUITY AND INCLUSION

Worldwide, resource extraction is inextricably linked to ongoing forms of colonial and gendered violence. This is often tied to the sudden influx of transient male workers who are often from class-

oppressed backgrounds. Workers may be housed onsite or using local infrastructure (e.g., hotels) that are colloquially referred to as “man camps” (given male workers make up a high proportion of employees compared to female and/or intersex/transgender workers). Workers often lack social ties to the local communities nearby, and therefore, lack social accountability to the point where “man camps” are described as “deeply embroiled in ongoing forms of coloniality and are intimately intertwined with gender-based violence that has long-existed with theft of Indigenous lands and resources” ([12], P. 411).

Overall, the impacts of “man camps” are heightened in smaller, rural communities resulting in strain on community services, increased crime, traffic, congestion, and accidents, and higher reports of sexual violence, racial violence, and harassment. This has been a controversial issue in Nova Scotia, with Mi’kmaq grandmothers opposing the construction of ‘man-camps’ associated with proposed mines and liquid natural gas projects [13]–[15].

As the Province reforms EA regulations, the government is in a unique position to better consider intersectional social impacts. We call on the province to review the 2019 update of the *Impact Assessment Act* (IAA) to emphasize Gender-Based Analysis Plus (GBA+) which is “a [...] process used to assess how diverse groups of [...] people of all genders may experience policies, programs, and initiatives”[16]. GBA+ has been added to the legislation because of Indigenous women and scholars, scientists, and activists who have highlighted the **negative** experiences of those who are most excluded from impact assessment processes and who experience the most harm because of resource extraction.

We encourage the Province to add a requirement for GBA+ assessment in updated EA regulations as part of all new Impact Statement Guidelines or guidelines for project documentation. Such inclusion can highlight the pathways of impact (ie., how present/historic extraction has caused harm to diverse community groups) which can inform, support, and reduce ongoing violence and harm associated with resource extraction. The updated EA reforms must emphasize stakeholder accountability and develop specific tools and resources that ensure accountability. They should focus on community-driven approaches to assessment for intersectional social impacts that emphasizes relationship-building, accessibility, and community and place-based knowledge.

Moreover, we caution that this work should not be led by proponents and/or the government who may have a vested interest in the outcome. Instead, we suggest that the Province ensure GBA+ assessments are conducted by local community workers, organizations, and/or other third-party groups through adequate resources to engage in this work over project lifetimes. The Province should also be adequately resourced with experts in qualitative and community-based methods for impact assessment to be able to perform expert review on presented documents [17].

INDEPENDENT REVIEW

Under the Province’s current model for EA, project proponents directly hire individuals or companies to collect and present social and environmental information regarding potential project impacts (a model often referred to as professional reliance). This process lacks independence and makes consultants vulnerable to the power their proponents wield (directly or indirectly), which

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has been identified as a serious weakness of the EA process [18], and led to documented corruption and under-reporting of risks and predicted impacts [19], [20]. EA practitioners themselves have expressed dissatisfaction with the quality of science and impact prediction in EA documents [21]. These pressures may be exacerbated in Nova Scotia where, unlike other provinces, most practitioners are not protected by regulatory bodies that represent and advocate for their professions (e.g., the A.P. Biol designation in Alberta).

Ideally, Project Documents would be prepared by an independent organization outside of the contract of the proponent [3]. In Canada, there is a much public and expert support for assessments to be conducted by independent bodies [22]–[24]. We recognize that undertaking this would require a massive overhaul of both EA and business-related processes in the Province and is unlikely to be pursued. However, we have recommendations to support independence, transparency, and public accountability under the current system. We draw attention also to the fact that Canada's Office of the Chief Science Advisor, in part responding to the scholarship cited above, has developed evaluative tools for enabling federal departments (including the Impact Assessment Agency of Canada) to assess the strength of science (natural, social and human) that informs impact assessments; these are in process of implementation. We urge the Province, if it has not already done so, to coordinate with OCSA in implementing robust standards of scientific evidence in line with such initiatives.

At minimum, like the federal participant funding program, Nova Scotia should create a fund to support public engagement and Indigenous consultation during all project EAs. Moreover, Ministerial EA decision statements should be more comprehensive and written in plain language, translated into Mi'kmaq and French, and must include a description of all relevant factors that were used to rationalize project decisions. The *EA Regulations* (and ideally the *Environment Act* itself) should be updated to add a 'scientific integrity' clause like that of the *IAA 2019* ("The Government of Canada, the Minister, the Agency and federal authorities must, in the administration of this Act, exercise their powers in a manner that adheres to the principles of scientific integrity, honesty, objectivity, thoroughness, and accuracy." [25]).

Currently, the process by which **Industrial Approval** permits are obtained post-EA for many approved projects is unclear. Therefore, a scientifically robust assessment framework should be developed and published for industrial approvals that require opportunities for public and Mi'kmaq engagement. Any major changes to an EA-approved project that increases the footprint, outputs, and/or production timelines should require a subsequent EA.

Furthermore, to support accountability to the public, the online [EA Registry for Nova Scotia](#), while an appreciated start, needs improvement. All EAs (including those prior to the year 2000) should be immediately added to the portal, and the portal should be updated to allow users to filter projects by categories (e.g., project type, status, location, year of review, industry). All industrial approvals for approved projects should be linked, and these documents should be provided in full as at present, only the most recent Industrial Approval is available for most projects. Finally, an 'opportunities for input' tab for all active proposed projects should be available, with clear comment deadlines. All submitted comments should be posted online and viewable by the public. We recommend the Province use the [Canadian Impact Assessment Registry](#) as a model.

NETUKULIMK

Netukulimk is “a complex cultural concept that encompasses Mi’kmaq sovereign law ways and guides individual and collective beliefs and behaviours in resource protection, procurement, and management to ensure and honour sustainability and prosperity for the ancestors, present and future generations” ([26], P.1). Given ongoing impacts of settler colonialism through land and resource theft, we call upon the Province to consider the Mi’kmaq as equal legal rights holders to the land and rectify historic injustice including through adopting the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP) into law (as has been done by British Columbia).

Specific steps future EA processes can take include prioritizing Indigenous-led Impact Assessment (ILEA). The Canadian federal government has created guidance for collaborating with [Indigenous peoples in Impact assessments](#), and the CEAR lab out of UBC has created an introductory document on [Indigenous-led Impact Assessments](#). “Indigenous-led Impact Assessment is a process designed and conducted by Indigenous governing bodies (IGBs) for evaluating potential land use impacts of a proposed development”^[21] ([27], , P. 2). Guidance documents for ILIA that are co-authored by Indigenous communities will offer the province a good resource, even if from other jurisdictions [28]. Specifically, there have been numerous examples of Indigenous-led Assessment with several Nations in so-called British Columbia including the Stk’emlu’psems to Secwepemc Nation, the Tseil-Waututh Nation, the Ktunaxa Nation, and the Mikisew Cree First Nation, and Indigenous guidance relevant to cumulative effects assessment is available for the province to draw from, with specific input from the Confederacy of Mainland Mi’kmaq [29].

While we recommend that Nova Scotia prioritizes Indigenous-led Impact Assessment, we caution that such work must undertake an intersectional approach. Historically, Indigenous consultations have excluded Indigenous women from Environmental Impact assessments. In recent years, proponents have used impact benefit agreements (IBAs) with Nations, which are developed to benefit local Indigenous communities, but can often be used to favour proponents interests over those of Indigenous communities [30]. IBAs are conducted with the Elected Chiefs and Band Councils (e.g., Indigenous governing bodies) which happen behind closed doors. Such IBAs may specify transfer funds or requirements for hiring Indigenous staff at worksites. However, Indigenous women have failed to be effectively included in IBAs. This is exemplified given that both on and off the job site they face continued harassment and discrimination including racial and sexual violence.

Moreover, on worksites, hired Indigenous women face systemic inequities from a lack of support in accessing affordable childcare while at work, as well as having low-paid, entry-level jobs with few opportunities for advancement. This, combined with growing evidence linking resource extraction to Missing and Murdered Indigenous Women, Girls, Two-Spirit, and gender-diverse persons in Canada, highlights *some* of the ongoing negative colonial impacts of resource extraction. Thus, while ILIA is a step that can be taken to rightfully return power and land decisions to Indigenous Communities, broad and intersectional community engagement is needed to ensure all voices are heard.

CLIMATE CHANGE

Climate change is currently impacting Nova Scotia, particularly through extreme weather events and sea level rise, with expectations that the severity and frequency of these impacts will continue to increase in the future. A mitigation and adaptation strategy for responding to climate change has rightly been put forward by the Province [31], with recognition that decarbonization is necessary. Relatedly, EA is perhaps the most critical decision-making tool for regulating projects that help meet climate mitigation and adaptation objectives [32]. Rather than solely relying on biophysical data and predictive modelling, the inherent complexity of climate change in EA requires synthesis through of regional information and diverse forms of knowledge [33] at much larger spatial scales (e.g., watersheds, landscape units) than a single project footprint.

In the meantime, climate change should be a **mandatory** component of all EAs, not left to Ministerial discretion. Moreover, climate change requires an all-of-government approach, and cannot be siloed in one department. The pillars of Nova Scotia's 'Climate Change Plan for Clean Growth' and how a project aligns with existing greenhouse gas emissions reduction targets should be written in the Terms of Reference or Impact Statement Guidelines as factors to address in every EA, similar to *IAA 2019*. Included within should be a quantitative estimate of the carbon storage potential of natural sinks (e.g., forests, soils, grasslands) at the proposed project site, and if/how the conversion of these sinks for other uses can be rationalized. Life cycle emissions analysis can be an effective tool for proponents to consider, with inclusion of potential spillover effects (e.g., upstream or downstream emissions in another jurisdiction), when addressing climate change impacts in EA.

Furthermore, climate change has the potential to trigger catastrophic events (e.g., oil spills, tailings dam failures [34]) from development projects, so EAs should require comprehensive risk mitigation and emergency response measures. Healthy wetlands, freshwater ecosystems, and groundwater resources are essential to mitigate climate change but are also highly vulnerable to impacts [35]. Where risks to upstream or downstream aquatic systems are present, EA should require science-based avoidance, mitigation, and (as a last resort) offsetting measures that account for potential impacts occurring outside of the immediate footprint of a project. Relatively undisturbed lands and waters should not be considered for development projects until disturbed or degraded areas are examined for feasibility first.

Climate change will continue to increase sea level rise, storm surges, and coastal erosion in Nova Scotia. For coastal development, EAs should require and strengthen the coastal risk factor assessment methodology introduced under the proposed regulations [36] attached to the *Coastal Protection Act* (2019), which has not been implemented to date. Natural shorelines should be maintained wherever possible. We recognize that scientifically robust incorporation of climate change in project-by-project EAs is difficult, which highlights the importance of a regional landscape and waterscape planning approach that can enable a cumulative effects lens, crucial also to assessing where climate change can be considered with across all valued components both individually and holistically in relation to social and ecological systems.

UPHOLDING LEGAL EXISTING REQUIREMENTS

Whereas many EA regimes include multiple streams depending on the level of risk associated with the proposed project or activity, it is necessary that all streams undergo a standard of assessment sufficiently rigorous for regulators and the public to understand predicted impacts, trade-offs, and the sustainability of the proposed enterprise [37].

At present, almost all EAs in Nova Scotia go through the Class 1 undertaking process and are approved 50 days after registration. However, this process is insufficient for the estimation and consideration of the adverse effects. As detailed procedurally in the *Environment Act* (S. 34 (1)), the 50-day period after registration is meant as a **screening step**, the outcome of which can be Additional Information Required, Undertaking Approved, Focus Report required, EA Report required, or Undertaking Rejected. Given that the Minister is required in the Act to request more information if there is a “likelihood that [the project] will cause adverse effects or environmental effects that cannot be mitigated”, it is baffling that the most common outcome is approval after the 50 day period.

At present, under a Class 1 EA, technical, public, and Mi’kmaq review happen concurrently rather than as an iterative process whereby issues raised by these groups are subsequently addressed by proponents. Areas of *significant concern about adverse effects* are put as a term and condition rather than being provided as information to support further Ministerial decision-making. When approvals happen immediately after the 50-day screening, **public and Mi’kmaq concerns are never addressed by the proponent.**

Ideally, the *Environment Act* would have S. 34-49 completely overhauled to align with the standards and timelines of EA in other jurisdictions (such as that from the *IAA 2019* with a ‘Regular’ process and a ‘Review Panel’ process for projects deemed higher risk). The public, provincial and federal government, and Mi’kmaq peoples should have ample opportunity to review documents through several EA phases (screening, impact statement phase, impact assessment phase, decision-making phase, and post-decision phase), and then the Province would issue ‘Information Requests’ through each phase whereby the proponent must answer questions or pose solutions to issues raised during the review period.

Currently, the system is unfair to the public, experts, Mi’kmaq communities, and regulators who have insufficient time and information to robustly review project documents. Moreover, it is also unfair to the proponents as they cannot clarify or propose solutions to issues that arise prior to a decision being taken. Finally, it creates unfair pressure on the Minister who is forced to make a decision with incomplete information. Overall, this poses risks of legal jurisdictional challenges, given that there is insufficient time or information to appropriately engage with federal departments on cross-jurisdictional responsibilities (air emissions, fish and fish habitat, species at risk, toxic substances, shipping and navigation, etc.). Furthermore, requests for additional information (*EA Regulations* S. 13 (2)), **are not decisions that should burden the Minister** given the already-extreme obligations on their time. Rather, there should be robust Impact Statement Guidelines and consideration of public and Mi’kmaq comments, and, as in other jurisdictions, it should be a standard part of provincial EA Officer’s work to request additional information.

PRIORITIES FOR THE 2024 MODERNIZATION WINDOW

While we encourage all recommendations in this report to be pursued and completed over the next three years, we recognize the need to prioritize those most immediate for implementation by May 2024. These include:

1. We believe that approval of most projects after the 50-day screening phase **may be an error**. Based on our understanding of the law, whenever regulators, governments, experts, and the Mi'kmaw identify concerns of adverse effects, the decision taken should be either Additional Information, Focus Report, or EA Report. We recommend the **Office of the Auditor General of Nova Scotia** should investigate the history of the decision process for Class 1 EAs to ensure the law is being appropriately interpreted by the Department of Environment and Climate Change and the Minister.
2. Mandating GBA+ as a lens through which to assess impacts must be a mandatory part of all new assessments; further, consideration of a project's impact on sex, gender, and their intersection with other identities should be added to the factors for Ministerial decision-making. This would be coupled with increasing the Province's in-house expert capacity for technical review of sections of project document related to GBA+ and social and economic impacts more generally.
3. A commitment on the part of the Province to uphold scientific integrity in reviews should be added, explicitly, to the *EA Regulations*.
4. The online EA Registry should be overhauled to improve searchability, include *all* EA reviews (including pre-2000), and to link to all Industrial Approval permits for approved projects. Such transparency and completeness of record will also facilitate adaptive management.
5. Make use of S. 47 of the *Environment Act* to support joint assessments between the Province and Mi'kmaw communities.
6. Develop a participant funding program in which Mi'kmaw communities and the public can apply for funds to support their participation in, and independent study of, EA processes for proposed projects.
7. Initiate a province-wide process of collaborative regional land and water-use planning between governments, Mi'kmaw Nations, and communities at the level of watersheds or ecodistricts. Nova Scotia is blessed with deep resources in academia, communities and ENGO sectors to assist the government in this effort.
8. Include cumulative effects as a lens for impact predictions for all Valued Components in project documents, rather than additional section at the end of documentation.
9. Climate change should be a mandatory prediction component in all project documentation (including EA Reports, Focus Studies, etc.) and projects should not be approved without providing estimates of both climate change on the project and the project's impact on climate change.

Thank you for considering our recommendations. The lead authors have experience in writing and advising on policy, would be happy to discuss these in detail, including approaches for operationalization, with staff in the public service and relevant parties.

Yours truly,

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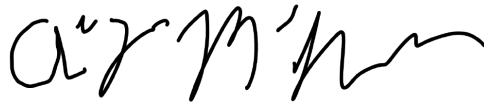
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