

MLi3 Inc. Commentary on Marten Falls Community Access Road Draft EIA Guidelines

1. Overview

The draft Guidelines are a good attempt to build a defensible form of EIA guidance to the proponent. They are very comprehensive. Notwithstanding the title, however, these “Tailored Guidelines” need substantial ‘tailoring’ to help the proponent create a clear, practical and defensible scope of assessment for the project.

The draft Guidelines reflect a very significant effort to display consideration of Indigenous culture, value systems and sensitivities. That said, the guidance’s reliance on listing of subject matters deserving assessment attention is so discretized as to lose sight of many of the holistic, synoptic value systems that Indigenous communities repeatedly say they want applied in assessments. Further, they ignore other factors affecting assessment processes, especially technological innovation, uncertainty about best practices in planning for community engagement and calls for greater rigour in cost-benefit analysis.

As well, there is a somewhat dated quality to the draft. Most especially, it doesn’t reflect any sense of the real urgency of many of the environmental-protection needs within the Boreal.

My comments arise from 3+ decades of designing, managing, interpreting the results from, and documenting EIA processes. I could have written on almost every single itemized subject matter in the draft Guidelines. I will confine this communication to only 4 matters. Three of them were asked of me in the WebEx on Friday morning. I am grateful for the opportunity to contribute.

2. Regarding the “3-10 Year Construction Period”

Because assessment is project-specific, the project construction must accordingly be “specific”. The proponent’s present uncertainty about the construction period will affect the design of the impact assessment. Impacts will become evident in fundamental ways (e.g. process cost, scientific credibility, duration and public acceptance). If the construction duration takes “less” time (e.g. 1-3 years), then fieldwork designs, selection of fieldwork personnel, costs and selection of methods will be quite different from programmes focussed on a “longer” (e.g. 5-10 years) construction period. Worse, if an assessment process begins with one construction period in view, and that timeline evolves during the assessment process to a substantially different construction period, then the resulting change in analytical methods, study-team personnel, the statistical analytical program, community understanding of project attributes and other matters will make data interpretation and communication of findings very difficult. Robust statistical tests of trends will become nearly impossible. Worst of all, explanation of results to lay persons would become almost incomprehensible. All data interpretations, all ‘findings’, would have to be so qualified, so nuanced and layered, as to defy clarity of understanding. The resultant appearance of “guardedness” would be most unhelpful. From the purely methodological view, this is a critical issue that must be resolved, and well before an assessment begins. If it is not, then the government won’t have defensibility of assessment

outcomes. Perhaps worst and most unfortunate of all, the proponent could fall victim to perceptions of process mismanagement. Thus, resolution of this uncertainty is strategic, not tactical, to both regulators and the proponent.

3. Regarding planning for Indigenous Community Engagement

One of the most difficult things that Indigenous communities have to deal with in assessment processes is the assessors...and the whole assessment process. People like me, like all of us, have been approaching them for decades, asking for their thoughts, for their feelings, for their knowledge. For which we have given them almost nothing...

I learned I was ignorant of many things before even starting to think about planning a process seeking engagement with people in native communities. Among them were such things as:

- What the cultural history of the community(s) was, and what that might mean for the design of a process seeking engagement with the community(s);
- Whether there was more than one Indigenous language to which the engagement process should attend in developing draft communications and planning for dialogue;
- Whether the governance of the community(s) was matriarchal, patriarchal or driven by some sort of fidelity to the *Indian Act*;
- Whether the assumed long-term tenancy and land use has been verified in some form of way credible to the community(s) and to the regulators (e.g. by a respected institution [like the Centre for Rupert's Land Studies; <https://www.uwinnipeg.ca/rupertsland>] or a respected expert [like Mr. James Morrison; <https://uncaprcap.files.wordpress.com/2015/04/the-robinson-treaties-of-1850-morrison.pdf>; <https://aptnnews.ca/2018/06/06/why-21-ontario-first-nations-are-challenging-canada-over-4-payments/>]), such that confidence in the local sense of history was affirmed, and the possibility of differing (even conflicting) senses of land-tenure responsibility had been fairly examined and justly set aside;
- Whether there were persisting and unresolved conflicts with prior resources developers, regulators, neighbouring communities (and even clans within communities) that could prejudice the outcome of any new "liaison" or "engagement" process;
- Who the Elders were, and whether they were all considered to be fully or equally responsible for representing community values and concerns to 'outsiders'.

We are all very ignorant, still, both in this growing field of 'impact-assessment planning' and, regrettably, in the much newer field of 'sensitivity to Indigenous Peoples and their histories'. Any Guidelines worth their salt must at least should acknowledge our general ignorance, and try to suggest ways to do better. (And mistaken effort is better than no effort, in my view). Accordingly, after such an acknowledgement, it might be helpful to prescribe requirements for the assessment practitioners to set out the elements of their planning for engaging with Indigenous communities. Practitioners should be asked to do more than merely prescribing, for instance, intended use of local human resources, or intentions for communications in the relevant languages and dialects. These are important, but the less-obvious matters can be more

important. At minimum, practitioners should set out their understandings of factors able to fundamentally affect the potential for successful engagement with community residents, such as: (i) local cultural history; (ii) land-tenure history and the “inter-digitation of land-use practices” of various groups or clans within the study area; (iii) community-governance systems; (iv) significance of all prior resources ‘development’ within the study area; and (v) local “leadership”, as locally defined.

4. Regarding Draft Guidelines Reflection of Current Urgencies

The draft Guidelines achieve a lot in outlining matters to be thoughtfully addressed in an assessment processes likely to be considered potentially credible. But they offer no guidance at all on matters of special ecological or biological urgency. Using only articles from one source, The Globe and Mail, environmental urgency is reported on almost every day in the general media. But the Guidelines prescribe no specific attention to concepts moving from the scientific literature into people’s living room and kitchens because of such urgency, like:

- *“Boreal forest at ‘tipping point’ of releasing more carbon from fires than it can store”* (Weber, Bob. The Canadian Press. August 22, 2019);
- *“The loss of three billion birds is the canary in the coal mine for the world”* (Bird, David. Emeritus Professor of Wildlife Biology, McGill University. October 1, 2019);
- *“One million species facing extinction, UN report finds”* (Semaniuk, Ivan. Science Reporter. May 7, 2019);
- *“Researchers call for action as human activity pushes caribou toward extinction”* (Semaniuk, Ivan. Science Reporter. October 30, 2018).

Concerns like ‘species extinction’ ought to matter dramatically more than they currently seem to. The draft Guidelines should speak with more focus...more determination...in describing requirements for attention to the **relationships** between phenomena, not just the matters themselves, especially **relationships in crisis** (see Semaniuk, 2018b. “Noah’s Ark reloaded: a new calculus for Canada’s species at Risk”. Sept 15, 2018, p. A13). The draft Guidelines must suggest more specifically the topics for attention, as the generality and simplicity of the draft language is so vague as to provide almost no ‘guidance’. This is especially so for analysis of project effects with potential to exacerbate impacts of climate change. As well, they must suggest consideration of potentially more useful analytical methods by which assessments may be advanced (e.g. “priority threat management” analytics; c.f. Semaniuk, 2018b). To illustrate: Losing “caribou habitat” because of a project’s impacts usually also translates into the loss, or deteriorated storage, of stored carbon, often in frozen permafrost. And, in turn, lost storage of carbon from such actions as road-building through permafrost-affected lands usually has knock-on effects, one being the release of substantial quantities of hazardous contaminants...such as mercury (Schuster, P.F. et al. 2018. *Research Letter - “Permafrost Stores a Globally Significant Amount of Mercury”*. Geophysical Research Letters. 5 February 2018).

Caribou habitat which stores “old” carbon beneath it must be vigorously protected to slow the trend for the Boreal forest’s sequestered carbon to be becoming “younger” (Turetsky et al 2019. Nature. April 30, 2019. “*Permafrost collapse is accelerating carbon release*”), and much more vulnerable. The habitat protects organic media that store not only carbon but also centuries-old accumulations of metallic hazardous chemicals. Deciding *which* such habitats deserve most vigorous protection requires insights from ‘decision science’ (c.f. Possingham, H., I. Ball, S. Andelman. 2000. *Mathematical methods for identifying representative reserve networks*. Quantitative methods for conservation biology, 291-306), perhaps to increase the number of species benefiting from the costs of any given protective act (c.f., C.S. Mantyka-pringle, T.G. Martin, J.R. Rhodes. 2012. *Interactions between climate and habitat loss effects on biodiversity: a systematic review and meta-analysis*. Global Change Biology 18(4), 1239-1252.

To reflect current urgencies, it is the relationship between ‘caribou habitat’, ‘carbon storage’ and ‘contaminant storage’ that must become an explicit matter for sophisticated analytical attention in the Guidelines; they cannot be assessed as if discrete and unconnected, by low-power analytical methods. There are other examples that can be provided to the scoping of the EIA to make it more attentive to these urgent issues, as experts like Ian Thompson can attest.

5. Edits to Draft Guidelines regarding establishment of assessment “Baseline”.

Establishing any set of Baseline conditions as foundation to any impact assessment is perhaps the most ignored area of assessment planning. Too much of planning focus is on data gathering and the relevant logistics. Too little attention is paid to strengthening Baseline accuracy and defensibility. Much attention is paid to popular high-tech ways to gather and even analyze data. Too little effort explores the range of new ways to identify, capture, store and analyze data repositories. Even where classical data repositories will exist locally (e.g. soil profiles, species-specific tree rings, fish otoliths), most assessment Guidelines don’t require them to be relied on. Thus, the listing of 17 sources of baseline information in s. 7.2 should be expanded to include those able to be analyzed, only if needed, to diversity, better quantify and better document “Baseline” conditions, especially in the future, where ‘tests of time-series trends’ to better understand project effects can become a higher priority. Additional sources that should be added include:

- Human-health indicator tissues (e.g. blood, urine, hair and fingernails);
- Human-health indicator data (synoptic, aggregated community and regional sub-population data, not individual health data) created from analysis (or meta-analysis) of health records stored in hospitals, nursing stations, regional health centres, etc.)
- Wildlife-health and growth-rate indicator tissues (e.g. talons, claws, fish otoliths, mammalian hair; bivalve shells);
- Tree health and growth-rate indicator samples (e.g. aging cores, leaves, needles);
- Soil health and classification samples (e.g. soil cores, soil-strata ‘grab samples’).

The listing of baseline information sources commendably includes “remote sensing information”. However, it is far better to say “remotely sensed data”. The focus should be on

assuring that comprehensive multispectral digital datasets from remote-sensing platforms (satellites, helicopters, drones, aircraft) for studying both terrestrial and aquatic features are purchased and archived for the study area. Only in this way can project effects be retroactively examined to respond to allegations of impact, or suggestions about unexpected consequences.

The discussion in s.7.1 could be greatly strengthened in two important ways.

The first is by the TISG strongly suggesting, if not outright requiring, that fieldwork planning ensure that satellite spectral data, to the maximum practical extent possible, are calibrated with ground-level sample data (i.e. "Ground-Truthing"). To enhance the credibility of all Baseline datasets, and to expand the amount of Baseline data generated by costly fieldwork, field teams should take all possible steps to: (i) schedule field work so key activities can be coincident with the overpass of key surveillance satellites; and (ii) ensure that all sampling/study locations are carefully GPS-located. In such ways, satellite-data calibration can "unlock" huge amounts of data otherwise not available to the proponent, regulators, or stakeholders. This is one of the most highly cost-effective ways to expand and enhance credibility of project-specific baseline data. There is no better way to increase the Return-on-Investment in establishing Baseline data, and thereby, the abilities to address environmental impacts of a project, especially over time.

The second is to strongly suggest, if not outright require, that when "*...modelling methods must be described...include[ing]...calculations of margins of error...*" that such "margins of error", when applied to mathematical projections of future project financial benefit be formally discounted by costs from calculation of climate-related risks to such features as roadbed integrity, ditch and culvert integrity, integrity of planned drainage flowpaths, etc. The modelled Net Present Value of the project assets must be subjected to the same rigorous conservative analyses and disclosure about climate-related risks to capital as increasingly required of all major investment strategies, and investment portfolios, to make capital pools sustainable (e.g. see for instance requirements of the UNEP Financial Stability Board's Task Force on Climate-Related Financial Disclosure [<https://www.unepfi.org/climate-change/tcfd/>]). See also: Zizzo, L. 2019. "*Canada must prioritize climate-risk disclosure*". Globe and Mail. July 23, 2019). If an EIA of such a project as the proposed road cannot show sustainable asset value over its intended life expectancy because of climate-related risks to the infrastructure, then this must be disclosed, fully and accurately. And disclosed the way that the private-sector project proponents are increasingly doing, and being compelled to do (see Zizzo, L. 2017. "*Companies can no longer hide their climate risk*". Globe and Mail. June 13, 2017; and McCarthy, S. 2017. "*Panel calls for companies to disclose climate-change risks*". Globe and Mail. Dec 15, 2017). Such analysis and disclosure is often driven by their proponents' institutional shareholders (see Sarra, J. 2016. "*Institutional investors must lead our transition to long-term sustainability*". Globe and Mail. April 2, 2016) and by bond-rating firms that assess corporate and capital-project creditworthiness (see McCarthy, S and J. Nelson. 2017. "*New risks emerge for firms exposed to climate change*". Globe and Mail. Apr 5, 2017). The technical practice of EIA must keep pace with the state of financial risk assessment and disclosure, and with the risk aversion displayed by that sector. Anything less cheapens the assessment process and the product.

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