

Sustainability and regional assessment in next generation impact assessment

Robert B. Gibson, professor, School of Environment, Resources and Sustainability, University of Waterloo, Canada. rbgibson@uwaterloo.ca

Summary:

The paper introduces sustainability-based next generation regional assessment and considers relevant Canadian experience.

Introduction:

Regional assessment is an area of long recognized and too rarely realized potential. This paper is about how regional assessments should be done as a key component and venue of next generation impact assessment. While next generation impact assessment is a loose concept open to various framings and emphases, it is essentially a consolidation of what we've learned and what we now need to address in impact assessment.

Regional assessment

Regional assessments are promising means of mobilizing strategic perspectives and tools to address four problems and opportunities beyond the usual capacity of project assessments:

- cumulative effects, and what to do about them;
- broad alternative options for development or conservation or some combination;
- consistent regional/strategic guidance for project planning and assessment (to ensure project contributions to desirable futures as well as to make project planning and assessment easier); and
- mobilization of more comprehensive tools, including continuing governance arrangements, for facilitating just transformation, protection and rehabilitation.

In Canada, we have as yet too few exemplary models within the assessment realm, but we have decades of equivalent experience in regional and sectoral planning (e.g., for forest management, electric power systems, urban growth management) and in *ad hoc* applications.

Sustainability-based next generation impact assessment - foundations

Next generation impact assessment is a consolidation of learning from two overlapping sources. The first is our 50+ years of IA experience about what works, what needs repair and what needs belated application. The second involves major new global understandings and obligations – especially those centred on dynamic complex systems and unsustainable trajectories – that we must now apply in assessments.

Lessons from 50+ years of IA experience

The multitude of lessons from IA assessment experience so far do not fit in a short list, but the following points are indicative of their range and interdependence. Effective, efficient and fair impact assessment relies upon

- law-based requirements with clear core processes and substantive expectations;
- flexibility to address the diversity of undertakings and contexts at the project and regional/strategic levels;
- comprehensive scope covering all key effects and their interactions;
- early initiation;

- comparative evaluation of alternatives;
- credibility: rigour, timeliness, impartiality, transparency, open participation, fair administration, explicit criteria, reasons for decisions;
- effective follow-up;
- broad and continuous learning; and
- interjurisdictional collaboration.

Complex systems

We live in a world of highly complex systems with interacting components and endless dynamic feedbacks at multiple linked scales in which

- connections and interdependencies are at least as important as components;
- prediction of individual effects is only a step to anticipating interactions among effects and consequences;
- human interventions play major roles;
- uncertainties and surprises abound; and
- recognizing cumulative interactive effects is crucial, but only a start to identifying potentially viable futures, plausible pathways to them and adaptable strategies for combining just transformation with protection and rehabilitation.

Unsustainable trajectories

Much of what we are doing, locally to globally, is moving us deeper into unsustainability. Assessment today must help to reverse negative local to global trajectories including those of climate change, degradation of the biophysical foundations for ecological services, and conflict-inducing inequities (the result of most benefits from our already excessive exploitation of the biosphere going to those already most advantaged). Note that the three act together to make each other worse.

In that context, mitigating significant adverse effects is not nearly enough. Nor is balancing economic, ecological and social objectives. Instead, we need to align these objectives, reverse fatally trajectories, and foster mutually supporting initiatives and relations. Assessment must now deliver positive feedbacks – seeking best options for delivering multiple, mutually reinforcing, fairly distributed and lasting gains – through protection and rehabilitation of what’s desirable and just transformation of what is not.

Sustainability-based next generation impact assessment: the package

The current working package of sustainability-based next generation impact assessment components has 14 categories.¹ They could be reframed as 41 or 10. In any framing, they constitute interdependent parts meant to incorporate the past lessons and current understandings/imperatives.

1. Sustainability-based purpose, scope and criteria for evaluations and decisions
2. Application in integrated, tiered assessments covering all potentially significant undertakings at the regional, strategic and project levels
3. Interjurisdictional cooperation, collaboration and upward harmonization
4. Respect for Indigenous knowledge, rights and authority and facilitation of reconciliation
5. Suitable streams for assessments of projects and regional/strategic undertakings of different character and significance

6. Meaningful public participation
7. Full-process learning
8. Early process initiation
9. Rigorous and credible impact assessments focused on cumulative/interactive effects and uncertainties
10. Comparative evaluation of potentially reasonable alternatives, including the null option
11. Credible, accountable and authoritative decision making for assessed undertakings, policy making and other core initiatives in the IA regime
12. Follow-up of compliance with conditions, effect predictions, and effective response to monitoring findings
13. Independent and impartial implementation and administration
14. Effective, efficient and fair process

All components have implications for why, how, when and where to do regional assessment.²

Key potential benefits of next generation regional assessments

The main advantages of regional assessment are tied to strategic-level capacities for effective attention to the big, neglected issues and imperatives listed above. Current unsustainable trajectories will bring increasing demands for these capacities, especially in regional transformation applications (e.g., to guide energy shifts to non-fossil options, rehabilitate degraded and climate-stressed lands or waters, and/or meet Indigenous rights obligations).

No less significant are the credibility and learning advantages of impartiality, transparency and meaningful public participation at the regional/strategic level.

Arguably, next generation regional assessments are among our best routes to medium to long-term effectiveness, efficiencies, fairness in assessment regimes and beyond. They can deliver credible and authoritative direction for many regional activities, not only project assessments. They can inform and complement other strategic-level initiatives (e.g., in energy, transportation climate change mitigation and just transition). If they provide foundations for better continuing governance arrangements, the gains may be more lasting. And if their successes encourage broader adoption, they can contribute to a culture of sustainability application well beyond the assessment realm.

The catch is that none of that is likely to be easy.

Key challenges/difficulties facing next generation regional assessment

Predictably, serious challenges and difficulties accompany the advantages. Next generation regional assessment is demanding. It looks across generations in a world of short-term incentives. It takes transformational imperatives seriously in times of increasing avoidance and hostility to demands for more disturbing change. It embraces complexity, uncertainty and surprise when simplicity, clarity and predictability are preferred. It emphasizes interactions and overall consequences in governance structures with fragmented powers, mandates, expertise and capacities. It adjusts to the diversity of regional concerns and possibilities, despite demands for routinization and manageability. And those are merely the broad conceptual tensions.

At the practical level are complex issues, inadequate information, limited experience, uncertain futures, conflicting jurisdictions, time constraints, governments' preferences for strategic level secrecy and expedience, and opposition to adding another layer of assessment.

None of these factors makes the agenda for regional assessments any less important. But they add pressures for capable delivery and demonstrable success.

Canadian regional assessment experience so far

Canada has legislated assessment requirements at the federal level, in all ten provinces, in all three territories and in several Indigenous jurisdictions. None of them includes a regional assessment regime as sketched out above. However, Canada has tested many near-equivalent models in regional planning, including in cases where major transformations have been needed (e.g., in regional growth management planning in Ontario and British Columbia, in conversion to more sustainable multipurpose forest management and in land planning and management with Indigenous governing authorities).

These have been accompanied by decades of experiments with diverse, ad hoc applications, mostly not called regional assessments but with similar scope, agendas and process principles. Particularly notable examples include the following:

- exceptionally large project assessments with major regional implications;³
- overlapping assessments of major projects and larger systems;⁴
- planning-based collaborative regional undertakings;⁵
- regional planning in the territories;⁶ and
- special regional strategic assessments by independent, third-party panels.⁷

Since 2019, a few formal regional assessments have been authorized under the federal *Impact Assessment Act*. Of these, two parallel regional assessments on anticipated offshore wind development on the east coast are in progress and have issued interim reports.⁸ Two more (on the health of a heavily-used portion of the St. Lawrence River in Quebec⁹ and on proposed mining and infrastructure development in the remote Ring of Fire region of northern Ontario¹⁰) were initiated in response to requests from Indigenous governing bodies but have been suspended or slowed by jurisdictional conflicts or difficulties in negotiating terms of reference.

While no detailed analysis is possible here, one core lesson is evident. Despite the enormous diversity of regions, issues, scales, legal foundations, initiating and enacting bodies and delivered products, virtually all the completed cases have been characterized by a broad enough scope to qualify as sustainability-based, at least some inter-jurisdictional collaboration, attention to cumulative effects and alternatives, open consultative processes, impartial credibility, learning, strategic-level contributions and influence at the project scale. No less important given the difficulties identified above, all were possible.

Conclusions

In a world with 50+ years of IA experience, recognized complexity and unsustainable trajectories, regional assessment is highly promising and the roles to be played are crucial – for global as well as regional reasons.

Very little about regional assessment is easy. Especially in cases where regional assessments are needed most (transformation needs, weak or absent existing tools for managing regional cumulative effects, inadequate collaborative governance, poorly understood issues and options, tensions among key players) applications have been and will continue to be challenging. Nevertheless, the record of Canadian regional assessments and equivalents includes a diversity of remarkably positive achievements, even in quite challenging circumstances.

Ambition has been key. While many regional efforts under an assessment banner have focused on cumulative effects studies and stakeholder engagement, regional assessment equivalents have included innovative initiatives developing new regional growth management plans or guiding major transformation of policy and practice in managing watersheds, forests or energy systems. Most have taken many years and have been turning points in even longer deliberations. But they have demonstrated the possibility as well as the value of regional processes that address big issues, compare alternative futures and strategic options, and deliver transformational strategic-level guidance.

Regional assessments in Canada have also been increasingly collaborative, extending beyond federal/provincial cooperation to overdue inclusion of Indigenous governing bodies.

In general, the Canadian record reflects more frequent adoption of sustainability-based next generation assessment approaches, aiming to

- contribute to sustainability and embrace complexity, even when that language is not used;
- incorporate next generation procedural components – open, consultative processes, transparency, rigour, accountability, and follow-up – and respect their interactions;
- be effective – through sufficient ambition to deliver credible and influential strategic direction and support for project assessments and other initiatives; and
- be timely while also being realistic about time required for clarifying issues and options and building sufficient collective understanding and process trust.

Applications of the sustainability-based next generation assessment package across a diversity of cases with very different approaches, substantive issues and processes also indicate needs for flexibility.

Some future regional assessments may be reasonably well-focused and quick – where the process is sufficiently credible and builds on an established foundation of issue awareness, trust and capacity, and where a suitable governance structure is in place. Others will be considerably more complex – involving challenging research, deliberation and learning about current concerns and options including just transformations. Perhaps all will be increments in larger and longer processes informed by interim reports, continuing experiments, learning and governance adjustments.

With that combination – ambitious core principles/components, flexible specifics for diverse applications and a succession of mostly incremental accomplishments – regional assessments share the most plausible strategy for next generations' sustainability.¹¹

Endnotes and references

¹ See A. John Sinclair, Meinhard Doelle & Robert B. Gibson (2021): Next generation impact assessment: Exploring the key components, Impact Assessment and Project Appraisal, DOI: 10.1080/14615517.2021.1945891.

² In the accompanying presentation slide deck, this list of the 14 next generation assessment components is followed by discussion of key tasks and roles for next generation regional assessments, and substantive and process/governance considerations for decision making on where to do next generation regional assessments.

³ Successive examples of advanced, effectively regional assessment, covering the same region are the two assessments of major proposed gas pipeline projects in the Mackenzie Valley of the Northwest Territories – the Mackenzie Valley Pipeline Inquiry (the Berger Inquiry) completed in 1977 <https://publications.gc.ca/site/eng/9.700299/publication.html> and the Mackenzie Gas Project Joint Panel Review completed in 2009 <https://publications.gc.ca/site/eng/9.651807/publication.html>. Both recognized the proposed projects as undertakings with determinative regional implications, took a broad sustainability-based approach to their review (implicitly in Berger’s case) and engaged in extensive public consultation, including formal hearings.

⁴ One example is the overlapping assessments of Manitoba Hydro’s Keeyask hydroelectric power dam project and the utility’s provincial electric power system. See Manitoba Clean Environment Commission’s review of the Keeyask hydroelectric generation project, <http://www.cecmanitoba.ca/reports.html> and the Manitoba Public Utilities Board’s “Needs For and Alternatives To” review of Manitoba Hydro’s “Preferred Development Plan” <http://www.pubmanitoba.ca/v1/proceedings-decisions/mh-nfat/index.html> [electric power system plan](http://www.pubmanitoba.ca/v1/proceedings-decisions/mh-nfat/index.html).

⁵ A notable example is the work of the Canada/Ontario Royal Commission on the Future of the Toronto Waterfront, led by David Crombie. The Crombie Commission recognized that dealing effectively with waterfront lake contamination depended on better management of the contributing watersheds, sewage and stormwater run-off systems, greenspaces and impermeable surfaces, associated land uses, etc. See the Commission’s final report, Regeneration –Toronto’s waterfront and the sustainable city (1992) <https://publications.gc.ca/site/eng/9.699883/publication.html>.

⁶ Territorial land use planning results include those in the North Yukon, Peel Watershed and Dawson regions of Yukon [see <https://planyukon.ca/>] and the North Baffin Regional Land Use Plan [see <https://www.nunavut.ca/land-use-plans/north-baffin-region-land-use-plan> and the Keewatin Regional Land Use Plan, <https://www.nunavut.ca/land-use-plans/keewatin-regional-land-use-plan> in Nunavut.

⁷ A regional strategic assessment with exemplary reputation for effective consultation, well-founded recommendations and evident practical influence despite a quick (1 year) and low-cost (modestly over \$300,000) process is the Bay of Fundy tidal energy regional/strategic assessment, led by Meinhard Doelle and Joshua Leon. See their final report (2008) <https://oera.ca/research/tidal-energy-strategic-environmental-assessment-bay-fundy-phase-i>.

⁸ For information on the Regional Assessment of Offshore Wind Development in Nova Scotia, see <https://iaac-aeic.gc.ca/050/evaluations/proj/83514>. For information on the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador, see <https://iaac-aeic.gc.ca/050/evaluations/proj/84343>.

⁹ For information on the Regional Assessment of the St. Lawrence River Area, see <<https://iaac-aeic.gc.ca/050/evaluations/proj/80913>>.

¹⁰ For information on the Regional Assessment in the Ring of Fire Area, see <https://iaac-aeic.gc.ca/050/evaluations/proj/80468>.

¹¹ The accompanying presentation slide deck includes an appendix with 23 sustainability-based next generation regional/strategic assessment process design criteria.