

Social Sciences and Humanities Research Council of Canada Knowledge Synthesis Grant Evidence Brief

Title of Project:

Lessons Learned, Best Practices and Critical Gaps in Regional Environmental Assessment: A Synthesis of Canadian and International Literature

About the Project:

Regional-scale environmental impact assessment is increasingly viewed by governments, industry, non-government organizations and the public as a viable means to better understand and proactively address cumulative environmental impact issues such as carbon emissions, biodiversity loss, habitat fragmentation, and watershed pollution in light of proposed development programmes. Regional assessment (RA) is now a discretionary component of project-based impact assessment (IA) legislation in Canada. However, there is limited research on the scope of recent RA practice in Canada or elsewhere, or on identifying lessons to support RA implementation. The purpose of this Knowledge Synthesis project is therefore to characterize RA practice drawing on both academic and grey literature published between 2000 and 2020, and identify some of the emerging good practices that can render RA as helpful as possible to decision-making about natural resources development and conservation.

Key Findings:

A total of 42 Canadian and 10 international cases of RA were analyzed and profiled. Regional assessment in Canada is not evenly spread: practice is concentrated in western and northern provinces and territories. Nearly-three quarters of RA final reports were released within the last decade; nearly half within the last five years. The rising number of RA initiatives in Canada indicates increasing interest in this form of assessment, despite the lack of regulatory or legislative requirements to employ it. Of the 42 Canadian cases examined, 27 (64%) have a strategic component and 15 (36%) do not. Thirty-seven cases (88%) included a significant focus on cumulative environmental effects. Twenty-three cases (55%) contained both a strategic element and focused on cumulative effects assessment. Government is typically the lead proponent of RA initiatives in Canada while eight cases (20%) are Indigenous-led. Methodologically, RA is diverse: dozens of methods and tools are employed to assess impacts to a wide range of valued components. Public engagement and engagement with Traditional Knowledge are very commonly used in RA practice while scenario analysis is significantly less common. Internationally, RA practice appears to be widespread and very diverse in terms of motivations and goals ranging from facilitation of nationally important industries, to expedient approval of infrastructure investment programs, to establishment of science-policy advisory partnerships. Various arms of the United Nations are especially active in promoting strategic forms of RA.

We also analyzed 64 academic articles on RA. Of these, just 12 (19%) offer case specific evaluations of RA practice. Other themes in the literature include concept and framework development; integration of principles; integration of RA with planning and policy-making; promising methodologies, tools and techniques; and so on. It appears that the emphasis of regional-scale assessment has gradually shifted away from simply facilitating project approval toward also addressing key issues of governance, a focus on institutional capacity building including relationship building across institutions, socio-political dimensions, innovation and collaborative science and management. That said, we find that the academic literature is quite divorced from the RA practice record and that there is a significant gap in reporting and analyzing case experiences, especially for early attempts at RA which were completed up

to 20 years ago or more. As well, very few academic papers on RA touch on topics considered important to the evolution of IA and future of IA in Canada such as: climate change; gender; equity and fairness; trade-offs; Indigenous and northern contexts.

Overall, RA as a practice (not necessarily as a concept) is generally in an early stage of development. At present, it is likely possible to identify the inputs of an RA exercise (impetus, goals, scope, valued components, inputs/resources, assessment activities, assumptions and uncertainties, audience, and so on) for many cases, as well as immediate outputs in the form of case documentation and programs (including scoping reports, draft and final reports, action plans, public commentary on the reports, and so on). However, for the vast majority of cases it is likely too early to be able to verify predictions or determine outcomes (either mid-term or long-term, expressed as changes in knowledge, awareness, practices, or conditions). We find that cumulative effects assessment is central to RA practice, although building in a strategic element to the assessment is not necessarily.

It would be premature given the small number of in-depth cases analyses within academic literature and the early state of RA outcomes in many instances to attempt to judge what RA can or cannot realistically accomplish at present. Building on the findings of this research, it is now possible to perform additional meta-analysis and cross-case comparisons. This will allow synthesis of lessons learned and identification of best practices that are sector-specific, and valued component-specific. Clearly, the diversity, ambition, and momentum displayed among all RA cases examined, coupled with rising incidents of practice in Canada and elsewhere, is strongly indicative of widespread belief in substantive procedural and transactive benefits.

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