



Promise and dismay: The state of strategic environmental assessment systems and practices in Canada

Bram F. Noble*

Department of Geography, University of Saskatchewan, 117 Science Place, Saskatoon, Saskatchewan, Canada S7N 5C8

ARTICLE INFO

Article history:

Received 24 October 2007

Received in revised form 24 April 2008

Accepted 20 May 2008

Available online 15 July 2008

Keywords:

Strategic environmental assessment

Canada

State-of-the-art

SEA criteria

ABSTRACT

Has strategic environmental assessment (SEA) finally reached a point of maturity in Canada? Or, is it still stumbling to find its place in the impact assessment family? Strategic environmental assessment has been ongoing in Canada for a number of years, both formally and informally, and under a variety of labels and institutional models. The result is a system of SEA that is diverse, founded on a range of principles and frameworks, and not well understood. This paper provides a critical review of Canadian SEA systems and practices. To accomplish this objective, a manageable and diverse set of past and recent SEA and SEA-like frameworks and applications are described and critically analyzed based on a set of input, process, and output evaluation criteria. Results suggest considerable variability in SEA experience and value added. This is due in large part to the institutional and methodological pluralism of SEA, the boundaries of which are not well defined. Under the federal system, since the formalization of SEA, many applications have been disappointing in light of broader SEA good-practice principles and criteria. Indeed, some of the better examples of SEA have neither carried the SEA name tag nor occurred under formal SEA requirements. Further, many of the same challenges to project-based impact assessment also plague the development and value added of SEA. Of particular concern is the systematic separation of SEA from downstream decision inputs and assessment activities. As Canada commences review of its federal SEA Directive in preparation for the next generation of SEA, this paper reflects on what it has achieved in the prior.

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1. Introduction

Various forms of strategic environmental assessment (SEA) have been ongoing in Canada for a number of years; yet at the same time SEA remains the least understood of the impact assessment family. The beginnings of SEA in Canada date back to the Environmental Assessment and Review Process (EARP) of the early 1970s and the subsequent *Guidelines Order* of 1984, which defined the reach of environmental assessment to extend well beyond individual projects and encompass broader regional, conceptual, and policy-level review processes (Noble, 2002; Sadler, 2005). Early strategic forms of impact assessment, such as the Mackenzie Valley Pipeline inquiry (1974–1977), the Beaufort Sea hydrocarbon review (1982–1984), and the Atomic Energy of Canada Limited's nuclear fuel waste management concept (1988–1994), were operationalized as area-wide reviews, public review panels, and concept-based assessments. Although none of these early assessments were formally recognized as SEA, they have much to offer the future of SEA development.

It was not until 1990 that SEA was formally established by way of a federal Cabinet Directive and as a separate process from project impact

assessment, “making it the first of the new generation of SEA systems that evolved in the 1990s” (Dalal-Clayton and Sadler, 2005: 61). In many respects, however, the formalization of SEA in Canada was a step backwards for impact assessment in general insofar as the Directive created a non-statutory system for policy, plan, and program (PPP) assessment that would remain separate from any legislated environmental assessment process to come. Procedural guidance for SEA was provided in *The Environmental Assessment Process for Policy and Programme Proposals* (FEARO, 1993), with implementation subject to oversight by the Federal Environmental Assessment Review Office and later the Canadian Environmental Assessment Agency. Critiqued for inconsistencies and inadequacies in its application, a revised Directive was issued in 1999 to strengthen the role of SEA in PPP decision making and to clarify the obligations of federal departments and agencies.

From 2000 onward SEA experienced considerable growth. This new era of SEA, however, is in sharp contrast to the conceptual, public and area-wide reviews conducted under EARP; SEA under the Directive is narrowly focused on the implications of federal government initiatives and confidential memoranda submitted to Cabinet. It was not until January 2004 when Canadian federal departments and agencies were required to prepare a public statement whenever a full SEA had been completed. Outside the federal process, SEA is practiced largely on an ad hoc basis and with much less known of assessment experiences, frameworks and outcomes. As such, notwithstanding

* Tel.: +1 306 966 1899.

E-mail address: b.noble@usask.ca.

decades of SEA development in Canada there remains only limited knowledge of the diverse nature and scope of SEA systems and practices and the value added to PPP development and decision making. Aside from selected reviews of individual applications under the Canadian federal system (e.g. Auditor General, 2004; Hazell and Benevides, 1998; Noble, 2004, 2003; Sadler, 2005), there has not been an examination of Canadian SEA models and frameworks that includes both formal and informal applications across a range of federal and provincial PPP initiatives.

In response, this paper provides a critical review of formal and informal SEA systems and practices in Canada. More specifically, the objective is to present and evaluate a range of SEA case applications, characteristic of a variety of SEA models and frameworks, with a view to understanding how each incorporated a number of proposed SEA principles and design criteria and contributed to improved decision making. The case analysis is based on work completed by the author for the Canadian Minister of Environment's Regulatory Advisory Committee, Sub-Committee on SEA (herein referred to as the SEA Sub-Committee), in preparation for the review of the Canadian SEA Directive—the *Canadian Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals*. Lessons learnt from the case reviews, together with the *Directive* review, will set the stage for discussions concerning the 'next generation' of SEA in Canada.

This paper is presented in five sections, including the Introduction. In the sections that follow the study approach and review framework and criteria are presented. This is followed by a critical review of selected Canadian SEA experiences, and the results of the review framework application. The paper concludes with a number of observations concerning the state of SEA systems and practices in Canada, and opportunities and challenges for the next generation of SEA.

2. Strategic environmental assessment review framework

Evaluating SEA systems and performance has received considerable attention in the international academic literature in recent years; how-

ever, research into the application of these criteria suggests that they are not equally applicable in all decisional contexts and across all systems of SEA. There is indeed considerable evidence to suggest that no universal set of criteria can equally apply to all SEA contexts (Dalal-Clayton and Sadler, 2005; Fischer and Gazzola, 2006; Noble, 2003; Partidario, 2005); and not all criteria are equally valid for every SEA, but could vary from the policy to the program level (Fischer, 2002). Part of the challenge in developing SEA evaluation criteria is that considerations as to what SEA really is, what it delivers and how it should perform remain far from a consolidated stage (Bina, 2007; Vicente and Partidario, 2006).

Nonetheless, standardized evaluation of SEA against normative design criteria is a useful exercise for several reasons. First, it provides an opportunity to identify the 'state-of-practice' across SEA systems based on a common set of principles and criteria. Second, it enables identification of common SEA constraints and opportunities for improvement. Third, it provides an opportunity to refine normative models of SEA principles and criteria to better fit the realities of PPP decisional contexts—as Nitz and Brown (2001) suggest: learning how policy and planning actually work.

The criteria for this review were developed based on discussion with the SEA Sub-Committee, an interdisciplinary team of environmental, academic, industry, and government representatives; drawn from the IAIA (2002) SEA performance criteria; and then modified based on Thissen (2000), Sheate et al. (2001), Noble (2003), Gibson et al. (2005), Fischer (2005), and Jones et al. (2005). Following the lead of previous SEA evaluation exercises (e.g. Dalal-Clayton and Sadler, 2005; Fischer, 2002; Jones et al., 2005; Noble, 2004; Retief, 2007; Therivel, 2004), the criteria are separated into *system*, *process*, and *results* criteria (Table 1). The purpose of grouping the criteria is to ensure that the various elements of SEA are captured in each case analysis, and to limit the potential of mutually exclusive criteria appearing in any single category.

It is emphasized here that the success of SEA, with regard to outcome measures, is in large part a function of the input and process elements. That is to say, the added value of SEA is to a significant

Table 1
Criteria for strategic environmental assessment in Canada

System components	Evaluation criteria
1. Provisions	– clear provisions, standards or requirements to undertake the process
2. Integration	– application early enough to address deliberation on purposes and alternatives, or to guide initial conception of review for an existing PPP
3. Tiering	– assessment is undertaken within a tiered system of environmental assessment, planning and decision making
4. Sustainable development	– sustainability / sustainable development a guiding principle and integral concept
Process components	Evaluation criteria
5. Responsibility and accountability	– clear delineation of assessment roles and responsibilities – mechanisms to ensure impartiality/ independence of assessment review
6. Purpose and objectives	– opportunity for appeal of process or decision output – assessment purpose and objectives are clearly stated
7. Scoping	– centered on a commitment to sustainable development principles – opportunity to develop and apply more or less onerous streams of assessment sensitive to the context and issue – consideration of related strategic initiatives – identification and narrowing of possible valued ecosystem components, to focus on those of most importance based on the assessment context
8. Alternatives	– comparative evaluation of potentially reasonable alternatives or scenarios
9. Impact evaluation	– identification of potential impacts or outcomes resulting from each option or scenario under consideration – integration or review of sustainability criteria specified for the particular case and context
10. Cumulative effects	– consideration of potential cumulative effects and life cycle issues
11. Monitoring program	– procedures to support monitoring and follow-up of process outcomes and decisions for corrective action
12. Participation and transparency	– opportunity for meaningful participation and deliberations – transparency and accountability in assessment process
Result components	Evaluation criteria
13. Decision making	– identification of a 'best' option or strategic action – authoritative decisions, position of the authority of the guidance provided
14. PPP and project influence	– defined linkage with assessment and review or approval of any anticipated lower-tier initiatives – demonstrated PPP influence, modification, or downstream initiative – identification of indicators or objectives for related or subsequent strategic initiatives or activities
15. System-wide learning	– opportunity for learning and system improvement through regular system or framework review

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