Comparing Provincial EA: A Comparative Analysis of Five Canadian Provincial Approaches to Municipal EA

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Abstract

The purpose of this major research paper is to examine the provincial environmental assessment processes within five Canadian jurisdictions for comparison using the EAOGRAM metric created by the IAIA. The paper focuses on provincial EA and its subsidiary practices in municipalities to explore provincial EA at the local level and on the scale of large provincial projects.

Environmental Assessment is a well studied and utilized planning tool in Canada and much has been written on EA in each province individually and increasingly across jurisdictional lines. There is however, little written in terms of comparative analysis of these policies. That is, comparing jurisdictions side by side for commonalities and opportunities for improvement or to encourage a better understanding of how EA operates across Canada regionally. The diversity of approaches across Canada has garnered several attempts to standardize EA, however this has largely been unsuccessful due to the distribution of power in the provinces, the difficulty in administration, and the different needs of EA from each region.[1] This paper will further an understanding of the differences and commonalities between provincial EA practices in a few of

[1] Constitution Act, s. 92 and 92A, being Schedule B to the Canada Act 1982 (UK), 1982, c 11.

Canada's jurisdictions. The provinces are specifically British Columbia, Alberta, Saskatchewan, Manitoba and Ontario. The evaluation will utilize case studies from routine municipal projects, specifically road-extension projects to create a comparable baseline as it relates to municipal EA. The case studies presented are examples of typical road extension projects and thus reflect a comparable baseline by which to evaluate the projects. The evaluation will also employ the popular EAOGRAM developed by the International Association on Impact Assessment to evaluate each province on 10 criteria for effective EA practice. The provinces have been compared using this criteria by the IAIA in 1994, since then much of Canada's EA practices have changed, this paper will compare the 5 selected jurisdictions and contribute to our understanding of EA practice across provincial lines both municipally and provincially.

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Foreword

My family has always encouraged me to explore my passions particularly as it relates to environmentalism and ecology. I have always been interested in learning about wildlife exploring my local woodlots and learning about life on Earth. Nature was an obsessive interest to much of my family and I fit well into the group. I was fascinated with the species of the world and their intricate relationships to each other. However, despite my relentless passion for these creatures, growing up in the 21st century I quickly learned that due to the actions of humanity and our impact that our planet was in danger of losing huge sums of biodiversity largely due to human influenced activities, such as climate change and human development. It seemed to be the ever-present eye sore anywhere you looked on the planet, that our actions were unsustainable and would result in the loss and irreversible changes in systems we did not understand. This was compounded by the fact that this path of development that espouses 'infinite growth' on our finite planet originates more than 200 years ago and is embedded in all of our social, economic and political systems.

The solution, therefore, as is espoused by much of the modern environmental movement is to modify our relationship to the environment and our perceived notions of 'better' with infinite growth, an outcome that is thoroughly understood to be unsustainable. This is difficult to affect in practice because of the nature of modern and its proliferation around the planet. It stands then that one way to affect such sustainable change is through an iterative approach rather than sudden shift in paradigms. Processes such as EA seek affect such changes by focussing on

the decision-making processes involved in development and contribute to sustainability. One of the more popular phrases to describe this shift in approaches to decision making is to "Act locally, think globally."[2] The most 'local' forms of government often regulate environmental policy and changes that often have the most significant impact.[3] EA at all levels attempts to balance the need to preserve and enhance environmental components including those of cultural and social significance while also managing a timely and effective evaluation of project to improve its outcomes and benefits while minimizing any adverse impacts. The diversity in provincial approaches to EA across Canada raises questions about which approach is more or less effective and reveals unique characteristics which can improve EA or simply highlight the most common shortcomings in those processes.

This MRP has helped me develop a better understanding of how effective EA practices can support sustainable development objectives, the way these practices are implemented and how the policies and their application are central to effective EA. This paper facilitated an engagement and analysis of current EA legislation across much of Canada, as well as to develop an understanding of how to evaluate EA for their effectiveness. Similarly, engagement with the techniques and approaches to evaluating EA has provided invaluable insight into the ways in which EA is understood with the intention of improving the process to reflect greater effectiveness and better outcomes.

Objective 1: I am able to articulate how environmental assessment practices support sustainable development objectives. I am able to explain Provincial environmental assessment practices and relate them to broader conversations about environmental sustainability and how current practices do or do not meet those standards.

Objective 2: A broad knowledge of Canada's provincial environmental assessment regulations and how they are applied provincially on all scales from province-wide to municipal.

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[2] Sandberg, L. Anders, and Tor Sandberg. *Climate Change: Who's Carrying the Burden?: The Chilly Climates of the Global Environment Dilemma*. 2010. 21.
[3] Ibid. 45.

Objective 3: Able to competently evaluate EA practices for their relative efficiency and effectiveness based on supported literature on effectiveness. I will have an understanding of the outcomes of provincial EA processes in Canada and be able to suggest estimations as to their effectiveness and efficiency in practice.

Acronyms

BC- British Columbia
EA- Environmental Impact Assessment
EAA- Environmental Impact Assessment Act[4]
EAAB- Environmental Assessment and Approvals Branch
EAB- Environmental Assessment Branch
EAO- Environmental Assessment Office
EBR- Environmental Bill of Rights
EIA- Environmental Impact Assessment
EPEA- Environmental Protection and Enhancement Act (Alberta, 1993)
ERT- Environmental Review Tribunal
HRB- Historic Resource Branch
IAIA- International Association on Impact Assessment
GRT- Government Review Team
MCEA- Municipal Class Environmental Assessment (Ontario)
MEA- Manitoba Environment Act
MHI- Ministry of Highways and Infrastructure
MOE- Ministry of the Environment
RPR- Reviewable Projects Regulation
TAC- Technical Advisory Committee
TOR- Terms of Reference
SEARC- Saskatchewan Environmental Assessment Review Commission

[4] Many of the provinces use the acronym EAA to denote their provincial environmental assessment act. Rather than denote each EAA as EAA, instead the provincial abbreviation, ex. BCEAA for British Columbia or AEAA for Alberta, will be used. Despite the use of a provincial EA, the official name in each of those provinces is the EAA.

Introduction

Environmental Impact Assessment is one of the most commonly used planning tools on the planet. Though only a few decades old, it has proliferated to varying degrees all over the world. Canada is no exception and all provinces have their own unique approach to EA in addition to a Federal process. Canada is unique in that most of the jurisdictional power over the environment does not come from the federal government but instead from the provinces under section 92 and 92A of the *Constitution Act.*[5] The power the provinces have over "natural resources and the environment,"[6] results in a variety of approaches to environmental policy and planning. Despite this diversity, there is relatively little written in academia comparing the provinces policy approaches. This is largely because much of the literature on EA is about how to improve existing practices and analyzing how to establish new elements into the process.

Thus, although provincial practices are well studied and well practiced planning tools in Canada, there is little written in terms of comparative analysis of these policy regimes and few attempts at trying to understand the relative effectiveness of these practices. Such a side-by-side comparison could greatly benefit an understanding of how differing regimes in Canada can be enhanced or where they fall short. The diversity of approaches across Canada has garnered several attempts to standardize EA, however these have largely been unsuccessful due to the distribution of power in the provinces, the difficulty in administration, and the unique needs of

[5] Constitution Act, s. 92 and 92A, being Schedule B to the Canada Act 1982 (UK), 1982, c 11.
[6] Ibid.

each region.[7] This paper will further an understanding of the differences and commonalities between provincial EA practices by comparing a few jurisdictions on their effectiveness of EA practice: the provinces of British Columbia, Alberta, Saskatchewan, Manitoba and Ontario. The evaluation will utilize case studies from routine municipal projects, specifically road-extension projects to create a comparable baseline as it relates to municipal EA. The evaluation will also employ the popular EAOGRAM developed by the International Association on Impact Assessment to evaluate each province on 10 criteria for effective EA practice. The provinces have been compared using this criteria by the IAIA in 1994, since then much of Canada's EA practices have changed, this paper will compare the 5 selected jurisdictions and contribute to our understanding of EA practice across provincial lines both municipally and province-wide.

The most 'local' forms of government often regulate environmental policy and changes that often have the most significant impact. EA at all levels attempts to balance the need to preserve and enhance environmental components including those of cultural and social significance while also managing a timely and effective evaluation of projects to improve their outcomes and benefits while minimizing any adverse impacts. The diversity of provincial approaches to EA across Canada raises questions about which approach is most effective. That is the focus of this MRP.

[7] Noble, Bram F. *Introduction to Environmental Impact Assessment: A Guide to Principles and Practice*. 2010. 14.

Chapter 1: Context and Methods of Provincial EA

The distribution of power in Canada gives a great amount of control over the environment and natural resources to the provinces.[8] This has resulted in a great diversity of histories and contexts under which each province's EA policies have developed. It is important to understand these contexts and the typical approaches that each province takes to EA to get a better understanding of how EA practices in each province operates and thus how they will compare on the EAOGRAM. Section 1.1 presents a historical review of each of the five jurisdictions and their approach to environmental assessment.

1.1 Historical Context of each province in EA

A. British Columbia

British Columbia is a resource rich province, from its forests, minerals and renewable capacities in hydroelectric. Policy makers have struggled to create environmental policy that could effectively strike the balance between "the utilization of [British Columbia's] resources and ensuring that the benefits flowed to local communities."[9] The added challenge of minimizing adverse environmental impacts has proven "a difficult balance."[10]

The current version of the British Columbia EAA, which came into effect in 2002, marked a significant ideological shift from past iterations which focussed on prescriptive command and

[8] VanNijnatten, Debora. "The Struggle of the Canadian Federal Government to Institutionalize Sustainable Development." 2016. 6.
[9] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2005. 299.
[10] Ibid.

control regulation to a focus on limiting the role of government and simplifying the process.[11] There are several guides, issued by the BC Environmental Assessment Office (EAO), the *Procedural Guides and Templates* are the only documents that attempt to spell out how each assessment should be conducted and explain the objective of the province as, "committed to a more flexible, efficient and timely review of proposed major projects to help revitalize the provincial economy. Thus, a new, streamlined environmental assessment was introduced in 2002."[12]

Like many other jurisdictions, BC established its first environmental assessment procedures under policy guidelines rather than legislation, the first among them being coal and mining development. Each type of project in the province was given its own set of guidelines that set out a form of assessment, though typically focussed on engineering and safety issues. There were geologic and hydrologic considerations that resembled environmental assessment.[13] In 1981, these review processes were replaced with the Mine Development Assessment Process which created a more unified series of guidelines. Subsequently, the 1991 Environment Management Act,[14] was introduced which widened the scope of considerations particularly as it relates to environmental and ecological components. It would grant the MOE broad power to decide if an EA was required. Assessments were also limited to large industrial projects.[15] However, the most significant piece of legislation came in 1995 in the form of the British Columbia Environmental

[11] Ibid. 300.
[12] *Environmental Assessment in British Columbia: Comprehensive Review of Major Development Proposals: Balancing Economy, Environment and Social Well-being*. Victoria, B.C.: Environmental Assessment Office, 2010. Print.
[13] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act." 2005. 303.
[14] Ibid. 301.
[15] Ibid.

Assessment Act, 1995. This act took in much from the previous guidelines with an emphasis on defining prescriptive command and control regulations.[16]

However, in 2002, a majority BC Liberal party instituted a series of regulatory reforms that reduced government intervention and greatly simplified the process.[17] As part of that overhaul, the prescriptive EA legislation from 1995 was repealed and replaced with the current EAA. Interestingly, the explanation for the change according to the Guide to the British Columbia Environmental Assessment Process, says:

> *"the legislation should provide great flexibility in order that assessments could be designed to focus on specific issues and circumstances… this legislation enables EAs to be tailored and allow for a more streamlined process. They are intended to ensure EAs are more focussed and cost effective while remaining thorough and accountable."*[18]

This overhaul has not surprisingly been met with significant criticism, particularly for its "barebones approach and centralization of power in only governmental discretion."[19] The EAA does not contain a preamble or description of legislative purpose. The most significant criticisms are that it does not refer to sustainability or sustainable development which is often a principle of EA and underpins the purpose of the process. It also gives significant decision making power to the director of the EAO in determining if a project will have significant adverse environmental, economic, social, heritage, or health effects.[20] Although non-binding, the Guide to the British Columbia Environmental Assessment Process contains a section that sets out the 'purpose of the EAA.'

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[16] Ibid.
[17] *Guide to the British Columbia Environmental Assessment Process*. Environmental Assessment Office, 2003.
[18] Ibid.
[19] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act 2005. 315.
[20] Ibid. 306.

"Its primary goal is to identify and assess the potential effects that may result from development of a proposed project, and to develop measures for managing those effects. Environmental assessment… is an important means of ensuring that project decision making by governments and proponents is informed… Through the process of EA potential effect, potential effects of a proposed project are identified and evaluated early, to provide the opportunity for a project to be modified before irreversible project design and construction decisions are made. The results in improved project design helps to avoid costly mistake for proponents, government, local communities and the environment."[21]

The typical process of individual EA is in two steps, preapplication and post application. They are both completely managed by the EAO.[22] In the preapplication phase, the proponent makes a formal request to the EAO for an environmental certificate, the application typically includes findings from studies conducted by the proponent and consultants to assess the possible impacts of the project. The EAO then ensures the application is complete and other interested parties, including First Nations, are included both during the preapplication phase and during the public comment periods.[23]

Whether a project requires an EA or not and the degree of information that is required is dependent on the *Reviewable Projects Regulation* which includes mining, energy, water, waste, food processing, transportation and tourist designations. If the project is deemed a reviewable project, then the director of the EAO sets the terms for determining the scope, methods and

[21] *Guide to the British Columbia Environmental Assessment Process*. Environmental Assessment Office, 2003.
[22] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act 2005. 308.
[23] Ibid. 309.

procedures of the assessment to before an EA certificate will be issued based on the size of the project and where it falls on the *Reviewable Projects Regulation*.[24]

If an EA is required, then the executive of the EAO issues a section 11 procedural order that sets out the scope, procedures and methods for the assessment. This is usually followed with at least one mandatory public comment period however, more can be required if deemed necessary.[25] Multiple public comment periods are usually designated for large projects. Once the terms of the assessment are made, the proponent in consultation with the EAO, First Nations, and other government agencies prepare a formal Terms of Reference for the EA certificate. The process at no point requires the consideration of alternatives to the project itself, however it is recommended in the *User Guidelines to the EAO* document.[26] Once approved, again the EAO sets standards for the review on which to base the decision about whether to grant an EA certificate.[27]

Once the assessment is complete, the EAO has 180 days to complete its review and submit its report to the minister or ministers. Typical comment periods are between 30 and 75 days.[28] The ministers have 45 days to decide on the outcome of the project and grant or deny the EA certificate.[29] The process itself is typically quite efficient with few projects exceeding the time limits. However, the designation as a reviewable project is either voluntary or dependent on the

[24] British Columbia. Environmental Assessment Office. *Proposed Amendments to the Environmental Assessment Reviewable Projects Regulation*. 2002.
[25] British Columbia. Environmental Assessment Office. *Environmental Assessment Office User Guide*. Victoria: EAO, 2015. 10.
[26] *Environmental Assessment in British Columbia: Comprehensive Review of Major Development Proposals: Balancing Economy, Environment and Social Well-being*. 2010. 126.
[27] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act 2005. 308.
[28] Ibid. 309.
[29] Ibid.

projects scale on the *Reviewable Projects Regulation*.[30] This regulation has served to make several routine and well practiced projects exempt from a full EA study. **Table 1** illustrates the parameters of transportation projects under the Reviewable Projects Regulation for public highways. If a project does not exceed these parameters, it does not have to complete an individual EA.[31]

This simplification of the EA process in recent years does not necessarily mean that it does not function well. According to Murray Rutherford, " the strengths of the BC process include flexibility in designing assessments so they can be tailored to focus on impacts that are important for specific projects and can consider a broad range of positive and negative environmental, social and economic effects as well as give the option to proponents to apply to have a project assessed that would not otherwise fall within statutory triggers."[32] Many provinces in Canada have an EA regime that focusses primarily on self assessment. This is commonly met with criticism and BC is no exception. Environmental groups and First Nations criticize the "high threshold for projects to be included in the process, the lack of consideration to alternatives, a lack of mandatory public hearings, no assessment for cumulative effects and too much discretion given to the EAO."[33] Despite these shortcomings, the process maintains high approval among proponents.[34] Based on the EAOs "knowledgeable staff, easy accessibility and coordinated input

[30] British Columbia. *Proposed Amendments to the Environmental Assessment Reviewable Projects Regulation*. 2002.
[31] British Columbia. *Proposed Amendments to the Environmental Assessment Reviewable Projects Regulation*. Section 16. Table 14, Transportation Projects. 2002.
[32] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act 2005. 310.
[33] Ibid. 311.
[34] Ibid. 316.

from other ministries."[35] This juxtaposition is a common issue in BC and covers several platforms.[36]

TABLE 1: Reviewable Projects Regulation: TRANSPORTATION

Column 1	***Column 2***	***Column 3***
Project Category	*New Project*	*Modification of Existing Project*
1 Public Highways	**Criteria:** (1) Subject to subsection (2), a new facility consisting of ≥ 20 continuous km of paved public highway with ≥ 2 lanes. (2) Assessment of a new facility under subsection (1) does not include the dismantling and abandonment phases.	**Criteria:** (1) Subject to subsection (2), modification of an existing facility that results in the addition of ≥ 2 lanes of paved public highway to an existing paved public highway over a continuous distance of ≥ 20 km. (2) Assessment of the modification of an existing facility described in subsection (1) does not include the dismantling and abandonment phases.

Source: *Reviewable Projects and Regulations, Section 16, Definitions Part 8*[37]

B. Alberta

Alberta is a province where fast-paced development is encouraged by a culture that embraces growth and change. Alberta's approach to EA seems to mirror this image.[38] It seeks to protect the

[35] Ibid. 316.
[36] *Environmental Assessment in British Columbia*. Environmental Law Centre. University of Victoria, Nov. 2010. 41.
[37] British Columbia. *Section 16. Table 14, Transportation Projects*. Reviewable Projects Regulation. 2002.
[38] Hanna, Kevin S. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 318.

provinces natural resources while facilitating economic growth. The most important resource sector in the province is energy, and is evident with the oil rigs, drills, pumps and pipelines across the province. Forestry and pulp and paper also play a major role in the economy.[39] Given the capacity of these sectors to have such dramatic impacts on the environment, it is expected that EA in the province would be a major part of its policy. In many regards this is the case, as Alberta has a very centralized system for EA. However simultaneously, the province also lacks several basic functions and accountability tools from the process leaving it lacking in several areas. Some refer to the Alberta EA process simply "as a growth support tool lending a green stamp of approval to development decisions."[40] These concerns, are not necessarily signals of inadequacies but; rather they reflect problems relating to the willingness or capacity of decision makers and the public. If anything, Alberta's EA provides a stark look at how an EA process can be designed and function well while still neglecting several options and tools that undermine the process.

EA in Alberta came about in the 1990s when the province underwent a review of its pollution control and environmental protection legislation.[41] This resulted in omnibus environmental legislation called the *Environmental Protection and Enhancement Act*, 1993.[42] Previously, assessments were based on a set of guidelines and referral processes that covered only major projects. The EPEA created a more centralized and robust series of schedules and project types that in many cases stipulate the requirements for a project, in a broad sense. In addition to consolidation, the EPEA also streamlines the process to require far less time and resources.

[39] Ibid. 319.
[40] Ibid. 321.
[41] Ibid. 319.
[42] Ibid.

According to Creasey and Hanna, the province wanted "a process that not only provided an efficient and credible review of predicted impacts, but also did so without needlessly hindering development proposals."[43]

This consolidated piece of legislation means that environmental management in the province is administered by one comprehensive regulatory system.[44] There are however some major shortcomings to the act, including the complete lack of strategic environmental assessment and a high threshold for EA triggers.[45]

The environment department of the province, Alberta Environment, describes their system as "a framework for sustainable industrial development… that includes core business practices, project evaluation, approvals, monitoring, enforcement, setting standards, objectives, guidelines, and decommissioning and reclamation."[46] The process has three main goals: "To provide information, to provide a venue for public involvement, and to support sustainable development."[47]

All three of these goals have received great criticism for "watered down approaches to meaningful environmental policy."[48] Alberta Environment explains that their approach is "an information-gathering process" attached to a project.[49] It is described as 'the information needs of regulatory and resource management decision-makers, as well as informing the public, government agencies and industry about environmental matters. This is heavily criticized by the

[43] Alberta. AER. *Alberta's Environmental Process*. Calgary: Alberta Government, 2015.
[44] Ibid.
[45] Hanna, Kevin S. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 322.
[46] Alberta. Government of Alberta. *Environmental Assessment Program: Preparing Disclosure Documents for Environmental Assessment Screenings*. 2010. 7.
[47] Alberta. Legislative Assembly. *Environmental Protection and Enhancement Act*. Alberta Energy Regulator, 2014.
[48] Hanna, Kevin S. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 327.
[49] Ibid. 319.

Canadian Environmental Law Association because, "sustainable development is not defined in the act (EPEA) and… that neglects ecological, economic and cultural components outside of the… immediate project."[50]

Sustainable development is considered at the project planning stage. Alberta Environment claims that, "EA provides an opportunity to examine the effects that projects may have on the relationship between sustainable environment, a sustainable economy and a sustainable community."[51] This a commendable approach to sustainable development but proves difficult to define and even more so to implement, particularly given the lack of a definition of the term itself in the EPEA. The lack of strategic environmental assessment and the support role EA plays in decision making weakens the potential for the province to affect any form of meaningful sustainability assessment.[52]

The EA process itself is administrated by regional management offices all operating under the EPEA. The three regions are North, Central and South. The regional managers have final authority for all EA process decisions in their region. This presents limitations to the review process because the regional offices often interface with proponents and the public to build collect information on a project and conduct the assessment, but the decision is ultimately made by the regional manager, which have in the past differed in their final decisions.

A typical EA proposal is first screened by the regional office where the project is located. This has three potential outcomes. First, if the project is determined to be a mandatory activity then an EIA report is required. Second, if the regional manager determines that an EIA report is not required, then the proponent just needs to apply for approvals from Alberta Environment or

[50] Ibid. 331.
[51] Ibid.
[52] Ibid.

other agencies. The final possibility is that the initial information was incomplete and a formal screening process can be initiated.[53]

If it requires an EA, the proponent then prepares a terms of reference that is publicly available for comment and questions.[54] This form of public input can affect changes in the project design and First Nation benefits for a project, provided they are directly affected. Once the comment period is complete and the director sees that the changes, if any have been made they then issue the final TOR which is submitted to the EIA report director.[55] At all points throughout this process, the TOR and EIA report are made publicly available for comments. In this regard the process 'is effectively transparent.' The limitation is the degree to which outside agencies and public comments can affect the outcome.

The streamlined approach taken by the province has the benefit of functioning in a timely manner, with a straightforward process. The policy regime itself, under the EPEA is also quite robust and centralized enabling wide consideration of cumulative effects. It still lacks any strategic assessment possibilities, and oddly, the variance on regional approaches in the three offices can make consistent interpretation difficult despite its centralized approach.

C. Saskatchewan

Saskatchewan is the first province in Canada to introduce EA in 1971 to the government departments of mining and highways.[56] In 1973 with the Department of Environment Act was amended to facilitate a more systematic approach to EA and enable consideration of larger projects, the first of them being the hydroelectric dam on Wintego Rapids[57]. In 1976, a formal

[53] Alberta. Government of Alberta. *Environmental Assessment Program: Preparing Disclosure Documents for Environmental Assessment Screenings*. 2010.
[54] Ibid.
[55] Ibid.
[56] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*. Don Mills, Ontario: Oxford UP, 2016. 333.
[57] Ibid.

EA policy was introduced along with the establishment of the Environmental Assessment Branch (EAB) within Saskatchewan Environment. The process was met with enthusiasm and regarded as a success.[58] Over the next 4 years alone, 152 proposals were reviewed and 52 assessments conducted. Of these, 33 received approval, 15 were withdrawn and 4 not permitted to proceed.[59]

With EA already well established, the provincial government passed the *Saskatchewan Environmental Assessment Act*. The act did not replace the Department of Environment Act, owing to the unique focus on EA as a planning tool. It did however change the approach of EA from an environmental management tool to an "information and public input tool." The legislation for environmental protection was kept separate and remains valid. At the time it was the forefront of EA legislation in Canada, and has remained unchanged since 1980. Though lauded when first introduced, it has been criticized for not keeping up with the variety of EA tools in use such as cumulative and strategic assessment processes. The justification for this lack of change has been "that it has left relevant parties significant latitude to consider advances in best EA practice, including, cumulative effects analysis."[60] Nonetheless, many believe that the shortcomings of the legislation may have been better addressed had it been amended in the last 30 years. Even as early as the 1980s, the limits of such a barebones approach to EA in Saskatchewan began to draw greater criticism as over 600 proposals were screened but only 80 underwent full assessment and all but two were approved to proceed.[61]

As a result of waning public support for the process, the province appointed the Saskatchewan Environmental Assessment Review Commission (SEARC) in 1990.[62] Their

[58] Ibid. 334.
[59] Ibid.
[60] Saskatchewan. Environmental Assessment Branch. *Guide to Assessing Projects and Preparing Proposals under the Environmental Assessment Act*. Government of Saskatchewan.
[61] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*. Don Mills, Ontario: Oxford UP, 2016. 335.
[62] Ibid. 336.

mandate was to review the process and recommend changes to the legislation. Despite, over 162 recommended changes brought forward from SEARC in 1991 towards a new model, the provincial government did not introduce new legislation to overhaul EA.[63] Since then, little has changed with only a few amendments such as the introduction of mandatory assessment in forest management activities in 1996.[64]

EA still resembles much of the rest of Canada's EA processes, which is both a testament to the endurance of this process over the last three decades and a limited indictment of Canada's approach to EA. The process begins with a project proposal to the EA branch. They include a statement of the anticipated impacts and possible mitigation measures. Feedback is given within 30 days. If it is not deemed a 'development' reviewable under EA legislation then the proponent may seek other necessary approvals for the undertaking pursuant to applicable environmental or other applicable statutes and codes.[65] According to the Saskatchewan EA process, 'developments' include "any expansion, alteration, or initiation of a project, operation or activity that is likely to trigger one of more of the listed criteria within the legislation."[66] Unlike the project list model used in British Columbia and Ontario, the criteria approach permits the individual proponents to measure their proposed project against factors listed in the act, in section 2(d) that would indicate the likelihood of negative environmental impacts, for example:

(i) Have an effect on unique, rare or endangered feature of the environment;
(ii) Substantially utilize any provincial resource and in so doing pre-empt the use, or potential use, of that resource for any other purpose;
(iii) Cause the emission of any pollutants or create by-products, residual or waste products which require handling and disposal in a manner that is not regulated by any other Act or regulation;

[63] Ibid. 337.
[64] Ibid.
[65] Saskatchewan. Environmental Assessment Branch. *Guide to Assessing Projects and Preparing Proposals under the Environmental Assessment Act*. Government of Saskatchewan.
[66] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*. Don Mills, Ontario: Oxford UP, 2016. 337.

(iv) Cause widespread public concern because of potential environmental changes;
(v) Involve a new technology that is concerned with resource utilization and that may induce significant environmental changes; or
(vi) Have a significant impact on the environment or necessitate a further development which is likely to have a significant impact on the environment.

If any project, public or private, triggers any of these criteria, it must follow the EA process to its conclusion.[67] Ultimately, the EAB makes the final decision on whether a project is a 'development,' and the subjectivity of these 6 'triggers' has been cause for criticism over the last few decades. According to section 8 of the act, "no person shall proceed with a development until he has received ministerial approval,"[68] independent of all licences, permits or approvals. Violation of this clause risks "project shutdown as well fines up to $10 000 a day."[69] As Bowden and Weichel explain, "the low monetary penalties alone would provide sufficient deterrence for most large-scale projects… Project delay is a far more effective deterrent."[70] Given the potential consequences particularly in larger projects with construction deadlines, it is understandable that most proponents not only complete the preliminary proposal but also additionally complete an environmental protection plan (EPP) and a mitigation plan, all of which rely on the input and approval of the EAB.[71]

When a project is designated a 'development' the EAB then gathers a technical committee from a panel called the Saskatchewan Environmental Assessment Review Panel (SEARP) to review the proposal, assist in the TOR and review the eventual EIS document.[72] There are no required documents or content in an EIA set out in any regulations drawing great criticism to the consistency and quality of some EISs compared to others.

[67] Ibid. 338.
[68] Ibid.
[69] Ibid. 340.
[70] Ibid.
[71] Ibid. 337.
[72] Ibid.

Following the development of the TOR, there is a 30-day public comment period through written submissions to the minister, which can be increased if deemed appropriate.[73] Public meeting can also be scheduled if requested and held by the proponent in most cases. These public meetings are usually held during the 30-day period. Section 14 of the EAA also holds that the minister can at any time before a decision is made appoint a board of inquiry to examine all or any aspect of the development. This could theoretically prove useful in collecting information and greater reflection on adverse impacts and mitigation strategies, however, the minister is in no way obligated include the inquiry in their final decision.[74] The inquiry clause has only been used one time under EAA in Saskatchewan's history and that was the Rafferty Alameda Dam development.[75]

Once public participation requirements have been completed and information deemed satisfactory, the minister determines if the project is to proceed. Once the approval is granted, the proponent is 'free' to go on to seek other approvals, licences and permits. There is a limited degree of EA follow up unless it is stipulated by the minister during the final approval. Moreover, there is a lack of strategic EA in the province despite a strategic policy assessment outlined by SEARC in 1991.[76] The act itself is now almost 40 years old, despite numerous considerations and suggestions for amendments and improvements over that time and has remained relatively unchanged except for the formal inclusion of forest management into the Act. (a purview many already found the act covered)[77] This coupled with limits in public participation especially early in the process when a project is deemed a 'development' or scoped

[73] Ibid. 338.
[74] Ibid. 340.
[75] Ibid. 338.
[76] Saskatchewan. Environmental Assessment Branch. *Guide to Assessing Projects and Preparing Proposals under the Environmental Assessment Act*. Government of Saskatchewan.
[77] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*.2016. 338.

for the assessment itself, public participation of the process only applies once a project attains development status. This raises concerns over projects that should be deemed developments but are not and therefore do not facilitate public comment other than direct complaints to the Department of Environment.[78]

D. Manitoba

In many ways EA in Manitoba is far more progressive than many other provinces in Canada.[79] With a unique SEA component and clearly drawn EA classifications Manitoba has a well-organized approach to EA. The current EA legislation, the *Manitoba Environment Act*, 1988. It replaced the Clean Environment Act of 1968 and the Environment Assessment Review Process of 1975.[80] According to the *Guide to the Manitoba Environment Act*, the Manitoba government identified 6 basic principles that needed to be reflected in the new Act.[81] A licensing process, public consultation and participation, environmental scope, pollution control, non-polluting environmental damage, and enforcement. The purpose, in the first paragraph, states:

> *The intent of this Act is to develop and maintain an environmental management system in Manitoba which will ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for this and future generations."*[82]

The Department of Conservation is the responsible authority in administrating and approving environmental assessment in the province.[83] Similar, to Ontario (section 1.1E), public

[78] Ibid. 341.
[79] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 2016. 346.

[80] Ibid. 347.
[81] Manitoba Environment. *Guide to the Manitoba Environment Act*. Winnipeg. Government of Manitoba. 2002.
[82] Manitoba. Manitoba Environment. *Manitoba Environment Act*. Winnipeg: Manitoba Environment, 1987. Section 1 (1).
[83] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 2016. 350.

and private projects are both included in the same EA process. The designation of a 'development' is found in section 1(2) of the MEA:

> *(a) the release of any pollutant into the environment, or*
> *(b) an effect on any unique, rare, or endangered feature of the environment, or*
> *(c) the creation of by-products, residual or waste products not regulated by The Dangerous Goods Handling and Transportation Act, or*
> *(d) a substantial utilization or alteration of any natural resource in such a way as to pre-empt or interfere with the use or potential use of that resource for any other purpose, or*
> *(e) a substantial utilization or alteration of any natural resource in such a way as to have an adverse impact on another resource, or*
> *(f) the utilization of a technology that is concerned with resource utilization and that may induce environmental damage, or*
> *(g) a significant effect on the environment or will likely lead to a further development which is likely to have a significant effect on the environment, or*
> *(h) a significant effect on the social, economic, environmental health and cultural conditions that influence the lives of people or a community in so far as they are caused by environmental effects; (« exploitation »)*[84]

The developments are further categorized into three classes, each have very different requirements. Class 1 developments require significantly less than Class 2 and Class 3.[85] Their differences are their impacts on the environment. The Class of Development Regulation includes a thorough list of the kinds of projects included in each class of development.[86]

The actual EA process in Manitoba is divided into five steps, three of which are mandatory and two remain at the discretion of the Environmental Assessment and Licensing Branch or the Minister of Conservation.[87] The first step, like most EA processes, begins with the submission of a proposal by the proponent to the Department of Conservation.[88] The class and types of proposal must be included based on the Classes of Development Regulation. Once the Environmental Proposal Form is completed, a form that specifies the type of resource utilized and expected pollutant, impact on the environment, heritage and socio-economic implications submitted to the director of Environmental Assessment and Licensing, Manitoba Conservation

[84] Manitoba. Manitoba Environment. *Manitoba Environment Act*. Winnipeg: Manitoba Environment, 1987.
[85] Ibid. Definitions, Class 1 and 2.
[86] Ibid. Class 1 developments.
[87] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 2016. 351.
[88] Ibid. 350.

where it is advertised to the public and sent to the Public Registry.[89] The second step, also mandatory, requires that the proposal is screened by the public and technical advisory committee. The public is provided a 30-day period to comment and is further screened by a Technical advisory committee (TAC) and specific requirements for the project based on the class are provided.[90] A summary of the proposal is put on the public registry on the province's website.

The third step, a discretionary step, at the end of the screening process states that if the EA Licensing Branch or the minister require further information from the proponent, further studies or potentially consultations can be required. If there are any additional requirements, which will be dependent on the class and project type, the province may issue additional public hearings on the proposal.[91] This leads to the forth step which gives the minister discretion over the need for additional public hearings or comment periods throughout the process, if necessary. This is not a mandatory step under the act and often the mandatory 30-day comment period is the only opportunity for public comment.[92] Typically, when a project generates significant public interest, the director is more likely to require a public hearing. The only redeeming quality in this limitation is that if objections are received the director is required to provide written reasons to the objectors and inform them that the decision may be appealed.[93] The final step is the licensing decision. At the conclusion of the assessment and review process, the Department of Conservation makes decision to issue the licence with limits, terms and conditions or refuses.[94] If

[89] "MANITOBA'S ENVIRONMENTAL ASSESSMENT AND LICENSING REGIME." Manitoba Law Reform. *Manitoba Law Reform Commission*, Jan. 2014.
[90] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 2016. 352.
[91] Ibid.
[92] Ibid. 353.
[93] Ibid.
[94] Ibid.

granted the Environmental Assessment and Licensing Branch are responsible for enforcing the terms, limits and conditions through the work of environmental officers.[95] Proponents or stakeholders can appeal a decision to the Minister of Environment for judicial review.[96]

A unique shortcoming of the MEA is the lack of a definition of the term *significance*. The definition of 'development' in section 1(2) refers to "significant effects on the environment and on the social, economic, environmental health and cultural conditions." With no definition of this key term, the determination of what a significant component constitutes in EA remains at the discretion of the minister. This makes the term flexible and gives the director great latitude in defining what is and isn't significant to the process, however as the Manitoba Law Reform Commission has stated, "while discretion is a necessary feature of all statutory environmental assessment regimes, other provincial models offer clear decision-making criteria for various steps in the process…[and] although a best practice does not exist when it comes to defining significance in the context of environmental assessment, most experts recognize the need for guidelines, and for open, explicit reasoning to support significance determinations." The lack of such determinations or guidelines undermines the consistency and stringency of the process.[97]

Despite the very straightforward and well organized classification system in EA, there are shortcomings on the process of public consultation when it comes to a project attaining development designation. Public participation is only sought when 'development' designation is assigned, which raises questions about projects that are not designated projects or considered

[95] Ibid. 354.
[96] "MANITOBA'S ENVIRONMENTAL ASSESSMENT AND LICENSING REGIME." Manitoba Law Reform. *Manitoba Law Reform Commission*, Jan. 2014.
[97] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 2016. 354.

class 1 when public input encourages being upgraded to a class 2 or 3. The director can upgrade a project up a class but it seldom happens.

Similar to many other provinces in Canada, it also lacks considerations of cumulative assessment which has been highly criticized and several reports have concluded that "the expansion of the EA process to give greater consideration to cumulative effects would… greatly enhance EAs ability to achieve the objectives in sustainability."[98] Despite these pleas for such changes and oversight, proponents hold Manitoba's EA process as a very efficient and it seems at present that it is unlikely to change.[99]

E. Ontario

The Ontario Environmental Assessment Act (EAA) came into force in 1975 and applied only to Ontario government, department and agency undertakings. It was also accompanied by a publication exempting certain undertakings such as the Darlington Nuclear Generating station and, as we will see, whole classes of significant undertakings, such as all projects by conservation authorities and municipalities.[100] Even after being amended in 1977, the act was heavily criticized for not including private sector projects under EAA, exempting public hearings, the lack of information, as well as being bureaucratic and costly despite the lack of rules about how to conduct the assessments.[101]

This would change significantly when the EAA was amended in 1996 to become the Environmental Assessment and Consultation Improvement Act. Though still called the EAA, it strengthened the process by adding greater instruction for:

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[98] Ibid. 356.
[99] Ibid. 359.
[100] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2016. 361.
[101] "Auditor General Slams Ontario's Outdated Environmental Assessment Act – Groups Urge Government to Act." *Mining Watch Canada*. Dec. 2016.

- Requirements of the TOR
- Regulated timelines for reaching a decision
- Mandatory public consultation
- The ability to refer matters to mediation
- The ability to focus Environmental Review Tribunal hearings on outstanding issues; and
- Entrenchment of the class EA process and Part II orders.[102]

The EAA in its current iteration is a source of great pride for Ontario, some commonly regarding it as the "most comprehensive environmental assessment law in Canada."[103] The purpose of the EAA is to "ensure that decisions are made following a rational and objective planning process.[104] The definition of environment in the act is quite broad and includes, the natural, social, cultural, economic and technical aspects of the environment. The EAA defines the *environment* as:

a. air, land or water,
b. plant and animal life, including human life,
c. the social, economic and cultural conditions that influence the life of humans or a community,
d. any building, structure, machine or other device or thing made by humans,
e. any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
f. any part or combination of the foregoing and the interrelationships between any two or more of in or of Ontario; ("environment") [105]

It applies to public and designated private sector undertakings.[106] Public sector undertakings are often infrastructure developments, such as public roads and highways, waste management, and flood protection works. Private sector projects, with typical environmentally significant effects such as landfills, waste transfer, and incineration projects, are also subject to EAA.[107] It is also possible for the Minister of Environment or the Lieutenant Governor in

[102] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2016. 362.
[103] Ibid. 378.
[104] Ontario. Ministry of Environment. *Ontario Environmental Assessment Act*. Toronto. 1990.
[105] Ibid. Section 2.
[106] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2016. 363.
[107] Ibid.

Council to declare that EAA does not apply to a project. But, typically, considerations are also made to ensure that doing so would be in the public interest and impose conditions to ensure the environment will be protected.[108]

There are four primary forms of EA in Ontario, all of which target different undertakings in the province. They are individual assessments, declarations, designations and class environmental assessments. The Ontario Ministry of the Environment's Environmental Assessment and Approvals Branch (EAAB) completes the projects.[109]

Individual assessments are typically undertaken for larger scale projects such as waste disposal, transit ways, highways and other project types that are not covered by blanket environmental assessment. The process requires that a proponent submit a Terms of Reference subject to government and public review. Once approved the TOR sets out a framework and will guide and focus the preparation of the EA.[110] The way in which the TOR is submitted can vary but ultimately once accepted the minister makes a decision on the application and the proponent prepares the EA.

When the EA is complete and submitted to the ministry, the proponent is required to give public notice of the submission. Once a government review team (GRT) and the public has completed the review, the EAAB then publishes a document reporting any issues identified by the public and GRT.[111] A notice of completion issued and made available publicly for review where a second round of public scrutiny commences, lasting 5 weeks. The whole process is typically 30 weeks.[112]

[108] Ibid. 364.
[109] Ibid. 365.
[110] Ibid. 366.
[111] Ibid.
[112] Ibid 367.

At the conclusion, the Minister can take up to 13 weeks to decide if approval will be granted considering the submission by the proponent, the recommendations of the GRT, the ministry review and comments received from the public and other interested parties as well as the EA's consistency with the TOR.[113]

The introduction of timelines in 1990 is likely the most significant change the Act has seen, imposing timelines throughout the EA process where before there were none. This made the process significantly faster and projects typically do meet regulated timelines.[114] There is no penalty for not meeting timelines other than pressure from proponents, public and auditor criticism.[115]

Despite the reduced timelines and relative efficiency of EA practice in Ontario, not all undertakings subject to EAA must undergo individual assessment. As will be discussed in chapter 3, Class Environmental Assessments in Ontario are a form of EA for routine projects to streamline the process for which "the impacts are both predictable and easily mitigated."[116] This is particularly the case for municipal projects which most often make use of Class EAs. The class EA document sets out a standardized planning process so that a proponent that receives approval for a class of undertakings does not need to obtain separate approvals under the EAA for each specific project. There are a total of 11 class EAs:

1. Municipal Engineer's Association Municipal Class Environmental Assessment
2. Ministry of Natural Resources Class Environmental Assessment for Timber Management on Crown Lands
3. MNR CEA for Small Scale Projects
4. MNR CEA for Parks and Conservation Reserves
5. Ministry of Transportation CEA for Provincial Transportation Facilities
6. Go Transit CEA Document
7. Ontario Realty Corporation CEA for Modifications for Realty Activities
8. Ontario Power Generation CEA for Hydroelectric Facilities

[113] "Preparing Environmental Assessments." Ministry of Environment. 2017.
[114] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2016. 368.
[115] Ibid.
[116] "Preparing Environmental Assessments." Ministry of Environment. 2017.

9. Ontario Power Generation CEA for Shoreline and Riverbank Modifications
10. Hydro One CEA for Transmission Facilities
11. Conservation Authorities of Ontario CEA for Remedial Flood and Erosion Control Projects [117]

These 'parent' documents are preapproved have their own design and planning process which include public consultation components similar to individual EAs.[118] It is also possible if greater information is required or a concerned individual, group or agency identify significant environmental concerns, that the minister issue a 'part II' order on the project which effectively subjects the project to an individual EA.[119]

Though highly regarded across the field of EA nationally and internationally, there are still notable shortcomings to the process, particularly in follow up, monitoring and the enforcement of conditions of approval. According to Sonya Graci, "there are… few mechanisms to enforce requirements other than prosecution by proponents or stake holders… the difficulty in prosecution would come down to the wording of the requirements."[120] The self-assessment approach taken by the province although greatly reducing administrative costs and simplifying the process for expedience, must be reinforced with "structured legislation to… ensure project conditions are adequately met."[121] However, despite these shortfalls, the process itself remains competent and allows for several rounds of public participation and the several approaches to EA including the class assessment system to provide a broad range of avenues for EA to operate in Ontario.[122] The high regard with which many practitioners hold Ontario is at least partially deserved, but it also suffers from many of the shortfalls in other jurisdictions.

[117] Ontario. Ministry of Environment. *Ontario Environmental Assessment Act*. Toronto. 1990. Part II, Section 13.
[118] Government of Ontario Website
[119] Ibid, Part II, Section 15.
[120] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2016. 364.
[121] Ibid. 366.
[122] Ibid.

CHAPTER 2: Research Methods and Environmental Assessment Evaluation

The literature on EA evaluation is surprisingly scarce in part due to the diversity of techniques and approaches to EA. However, there is a strong movement to standardize efforts to evaluate for effective EA. This paper relies primarily on an evaluation technique employed by the International Association on Impact Assessment called the EAOGRAM. This section lays out the 10 attributes by which to reliably evaluate EA efficiency with explanations for how they are scored. It also explains how the survey itself is informed by the work of Barry Sadler, Robert Gibson and several international reports with the intention of situating this research in the body of literature on EA evaluation.[123] **Section 2.1** discusses the theory of EA efficiency and the metrics that underpins current approaches to EA efficiency including the EAOGRAM. It also discusses the authors that inform an understanding of each of the provinces. **Section 2.2** focusses specifically on the EAOGRAM and describes each of the 10 attributes, their usefulness, limits and the criteria for which a jurisdiction can score most effectively.

2.1 EA Evaluation Theory

Environmental Assessment is defined as the "process of identifying, predicting, evaluating, and mitigating biophysical, social and other relevant effects of development proposals prior to major decisions being taken and decisions being made."[124] This definition, also espoused by the International Association on Impact Assessment emphasizes "improving decision making processes and minimizing adverse environmental impacts."[125] EA itself is a

[123] Noble, Bram F. *Introduction to Environmental Impact Assessment: A Guide to Principles and Practice*. 2010. 6.
[124] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA. 2003. 24.
[125] Ibid.

planning tool that exists in the space between "conservation and development."[126] Although it is the most widely used environmental management tool on the planet, and the process which is typically broken down into several common steps there is still a great variety of approaches to the same forms of EA practice.[127] The explanation for this multiplicity of approaches is that the parameters of an assessment often need to shift based on the project, scale, region and variables of the project and thus result in a several approaches to the same EA process.

The diversity of EA approaches can make it difficult to compare and contrast differing EA practices and tools because of the unique contexts for many projects.[128] This raises questions about how to evaluate EA given the multiplicity of approaches. There are basic steps to a 'general' EA process but how to measure effectiveness and efficiency is a central concern to the analysis of EA and its iterative improvement. There is relatively little written about comparisons in EA, particularly in a Canadian context, but there are significant academic contributions to EA evaluation by writers like Barry Sadler. Sadler set out a broad criterion for EA effectiveness in his work *Environmental Assessment in a Changing World*, Sadler describes a 3Rs approach to evaluation. These criteria are what are found to be the basis of effective EA practice and has informed much of the research into EA evaluation including several reports from the IAIA.[129]

- Rigorous technical analysis (employing the most current, accurate and applicable science)
- Responsive public involvement (providing appropriate opportunities for interested parties to be involved and affect the process)

[126] Ibid.10.
[127] Ibid. 9
[128] Hanna, Kevin S. Environmental Impact Assessment: Practice and Participation. Don Mills, Ont.: Oxford UP, 2005. 14.
[129] IAIA report, 1994. These studies underwent a series of surveys that was used to understand the self-reported efficiency of EA in several jurisdictions. The surveys were a series of questions that were informed by 3Rs criteria.

- Responsible process administration (consistent, impartial enforcement of provision and guidelines) [130]

The way in which EA is evaluated is dependent on the political framework and institutions that relate to the process. In other words, a process done correctly but without clear objectives and imperatives for iterative improvement of decision making is not as effective an EA process as it could be. Sadler explains this in the international report "an EA process can only be understood and evaluated in relation to the policy and institutional framework in which it operates. The real test of successful performance is the extent to which EA has 'made a difference,' whether better decisions follow and environmental objectives are realized."[131] The same report described the typical approaches to EA policy including analogue approaches, decision-making checklists, cost benefit analysis, indices and expert opinion. These methods are then evaluated for effectiveness based on criteria such as the 3Rs or a specific series of criteria based on different cases.[132]

The limits of academic literature on EA effectiveness is somewhat unsurprising because the focus in EA is typically on the process itself and improving the process rather than comparative analysis of EA systems. This is in part due to the lack of interest in comparing international EA systems because of what is considered "regional, jurisdictional, cultural, social, and environmental differences."[133] The question proposed in this paper deals with how multiple jurisdictions administrating EA differently compare in effectiveness in their application? Although there are commonalities between provincial jurisdictions that are based in broad EA

[130] Canter, Larry W., and Barry Sadler. *A Tool Kit for Effective EIA Practice: Review of Methods and Perspectives on Their Application: A Supplementary Report of the International Study of the Effectiveness of Environmental Assessment*.1997.
[131] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA. 2003. 36.
[132] Ibid. 34-35.
[133] Horstmann, Klaus. "A Practical and Cost-effective Approach to EIA: Report of an International Seminar on EIA for Development, April 1984." 282-84.

processes, the question remains in their specific application. This is a subject that few academics have written on, and those that have present quite a broad view of each province individually and only some reflection on their comparative properties.

One such writer than has accumulated the experience of EA across Canada to provide a sense of comparison between the provinces is the subject of several of the chapters in Kevin S. Hanna's edited, *Environmental Impact Assessment: Practice and Participation.*[134] They are written by authors that discuss each of the province's EA systems, their history and typical function today. Murray B. Rutherford, explained the increasing streamlined function of provincial EA in BC, claiming that "the ideological shift, from an emphasis on prescriptive command and control regulation to a focus on limiting the role of government and improving efficiency."[135] Roger Creasy and Kevin Hanna's chapter on *Alberta: EIA in a Rapid Growth Setting* explain the history Alberta's EA history concluding that despite that criticism that "EA in the province suffers from a view of EA as a rubber stamp…that may not reflect inadequacies but instead problems relating to willingness or capacity of decision makers, the public and some environmental organizations to account for the information and knowledge provided by EIA."[136] The degree to which this is reflected in municipal EA may differ because of Alberta's "streamlined approach to municipal projects."[137] Saskatchewan has the oldest EA legislation in Canada passed in 1973, and Marie Ann Bowden and Bert Weichel in their chapter on *Environmental Impact Assessment in Saskatchewan* present an in depth historical breakdown of the EA process in the province and how it functions on all levels today. A common criticism of

[134] Hanna, Kevin S. *Environmental Impact Assessment: Practice and Participation*. 2005.
[135] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2005. 299.
[136] Creasey, Roberts and Kevin Hanna. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2005. 321.
[137] Ibid. 328.

the provinces' approach is that "despite the fact that the *Saskatchewan EA Act* is now over 30 years old…it still has no regulations to place flesh on the bare bones statute… conservation and institutionalized public participation... are not represented."[138] The barebones approach taken by Saskatchewan in contrast with the far more stringent approach of Manitoba, outlined by Kenton Lobe.[139] According to Lobe, "EA is a central feature of project decision making in Manitoba."[140] The province's is far more inclusive in "decision making projects… for many common projects."[141] However this is coupled with same EA processes such as staged developments which are common in Manitoba particularly their municipal practices, to grant a project approval upon ongoing and discretionary conditions. This effectively grants a project approval before it has approval. However, more often than not, these staged development approvals apply to projects with well-known outcomes such as municipal projects. Lastly, much has been written about Ontario's Class Assessment process which applies to several kinds of projects, most notably, municipal EA. There are 11 parent class EAs that apply mostly to municipal and some provincial agencies that act as "an umbrella that provides approval for a class of undertakings and does not need to obtain separate approvals under the EAA for each specific project, provided the class EA planning process is adhered to."[142] This process is far more simple than an individual EA and designed for "routine projects,"[143] with well understood impacts. Each of these chapters provide excellent explanations for provincial EA and contribute to our understanding of their comparative outcomes. This MRP is an attempt to utilize the EAOGRAM,

[138] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*. 337.
[139] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 348.
[140] Ibid.
[141] Ibid. 356.
[142] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 372.
[143] "Preparing Environmental Assessments." Ministry of Environment. Government of Ontario. 2017.

an internationally recognized series to compare five of Canada's provinces for their application of EA in municipal infrastructure.

2.2 EAOGRAM

The EAOGRAM, is a survey of 10 attributes developed by the International Association on Impact Assessment in 1994. The EAOGRAM attempts to evaluate a given series of jurisdictions based on 10 criteria critical to the effective administration of EA.[144] The attributes and their evaluation were compiled and completed by Derek Doyle, a member of the IAIA for over 30 years with significant experience working with EA in Canada and a team of over a dozen EA practitioners to evaluate the effectiveness of EA practice across all ten provinces in Canada and territories with the exception of Nunavut which would become a territory in 1999.[145] The study was quite revealing and presented a unique snapshot of EA in Canada both federally and provincially at the time. It was however, criticized for having the evaluations completed and largely dependent on government officials from their corresponding EA offices, which it is suggested explains, "how the provinces scored so highly... in some outdated EA models"[146]

The use of the EAOGRAM is an internationally respected metric on which to measure EA effectiveness, and offers a snapshot of the functions of an EA system relative to another. Effectiveness in the context of the EAOGRAM refers most simply to how well the EA process works. It is a measurement of "the degree to which EA is successful in producing the desired result of informed decision making."[147]

The purposeful reduction of routine municipal infrastructure projects, the most common form of MEA presents some issues about the thoroughness of the EA process as is expected to be

[144] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003.
[145] Adkin, Laurie E. Environmental Conflict and Democracy in Canada. 2009. 47.
[146] "Auditor General Slams Ontario's Outdated Environmental Assessment Act – Groups Urge Government to Act." *Mining Watch Canada*. Dec. 2016.
[147] Dictionary of the word effectiveness and the iaia-report

reflected in the EAOGRAM.[148] To be sure the EAOGRAM is a useful tool in evaluating all EA practice, but some of the scores will be informed by the provincial EA apparatus that can still be utilized by the EA process. The determinants by which to consider the process a success are explained by Barry Sadler in his foundational work in EA evaluation in the report, *Environmental Assessment in a Changing World*. The 3Rs of the process that Sadler presents are:

- Rigorous technical analysis (employing the most current, accurate and applicable science)
- Responsive public involvement (providing appropriate opportunities for interested parties to be involved and affect the process)
- Responsible process administration (consistent, impartial enforcement of provision and guidelines)[149]

These three conditions are reflected in the 10 attributes in the EAOGRAM and the attributes themselves also draw on and "correspond to EA principles and effectiveness criteria indicated in previous studies and the literature." The criteria themselves are:

- Clear Purpose and Goals/Direction
- Incorporates Long-Term and Overall Perspective
- Broad Scope of Application
- Responsive to Public/ Stake holder Investment
- Interjurisdictional Harmonization
- Monitors Results and Responds to Findings
- Certainty of Decision-making
- Living Process
- Provides Value for Money
- Achieves Environmental Sustainability.

[148] Doyle, Derek, and Barry Sadler. *Environmental Assessment in Canada: Frameworks, Procedures & Attributes of Effectiveness: A Report in Support of the International Study of the Effectiveness of Environmental Assessment*. 1996. 4.
[149] IAIA. Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness. IAIA, 2003.

(See TABLE 3)

A **clear purpose and goals** refers to the establishment of explicit objectives that the process seeks to achieve through the use of the process. The more clearly and explicitly laid out these goals are in legislation and supported by policy, procedural documents and guidelines, the higher a jurisdiction is rated. The letter rankings of A to E describe the degree to which a jurisdiction sets goals and sets out instructions from law and policy procedures, administrative practices to day to day problem solving. The lowest ranking of A is for a complete lack of guidelines or explicit objective, "no written guidance"[150]

The emphasis on a holistic approach to EA reflects the need to **incorporate long-term and overall perspectives** in the process. The degree to which this criterion is considered effective relies on several factors including the breadth of the definition of the environment, considerations beyond just the biophysical level and more broadly than the project level. The inclusion of cumulative assessment as more than just implied, the application of strategic assessment in some form and social and health analysis all contribute to the effectiveness of this metric.[151]

A **broad scope of application**, is central to anticipating the impacts of a project beyond the region of the project itself. Initially, EA focussed only on 'large' projects, but because of the importance of including considerations in cumulative assessment or regional impacts, it is important to "match [the project size] to the anticipated significance of project impacts."[152] EA now applies to small and large projects in certain activities. How widely applied and considerate the EA process is of projects that may have significant impacts is how this metric is evaluated. The lowest category applies only to EA on large projects only, and the more specific the tool the EA system offers, the better it scores. The highest rating includes an explicit cumulative and strategic EA assessment function.

How readily EA administrators are able to engage and **respond to public/stakeholder involvement** is a huge contributor to how effective the consultation process is. In many cases proponents and regulatory

[150] Ibid. 25.
[151] Ibid. 26
[152] Ibid. 27.

authorities only disseminate information but do not encourage active participation (dimension A).[153] As the International Association on Impact Assessment describes it, "When feedback is sought and can influence project design then consultation is occurring."[154] (dimension B) Typical projects in Canada score at least a C on the EAOGRAM, it is characterized by the interaction with proponents and agencies responsible for project planning and allowing comments to be reflected in the final decision. This case is most commonly, the inclusion of comments in EA statements or final reports. The highest rankings in this category encourage broad participation and engagement with the public through multiple mechanisms and seek to resolve disputes and disagreements between parties. They also use principled negotiation approaches to determine how projects will function. A good example of this is community impact agreements.[155]

The next attribute deals with how cooperative and inclusive the EA agency is with other agencies and potentially other jurisdictions, otherwise known as **interjurisdictional harmonization**. The minimum in this regard is for an EA agency to act alone with proponents to focus on and satisfy only the project requirements. A more complete approach to this attribute would include intra-jurisdictional harmonization, the inclusion of a formal agreement that sets out the responsibilities of each jurisdiction involved and adherence to interjurisdictional laws and principles.[156]

A fundamental part of the EA process, which is vital to validating the predictions and verifying the efficacy of mitigation measures is **Monitoring Results and Responding to Findings**. There are some jurisdictions that have no formal mechanisms to evaluate the results of an EA study and to rely on public complaints. This is the minimum score on this attribute. Thanks to at least some mechanism that could assign responsibilities to proponents such as requirements for periodic reporting and documentation of results. Despite this fact, this is one area that almost all provinces did find significant shortcomings. Greater inclusion of

[153] Ibid.
[154] Ibid. 25.
[155] Ibid.
[156] Ibid. 27.

periodic audits and adaptive monitoring responses would greatly benefit the effectiveness of Canadian EA and score higher in this metric.[157]

The **certainty of decision making** in the EA process has plagued some jurisdictions for decades. Ontario having only recently implemented structural timelines for greater certainty in the EA process. An EA system without such certainty, with few clear rules about how to attain an approval, and with too great discretionary powers, scores low in this attribute. The inclusions of specific timelines for different parts of the EA process, schedules for decision making activities (ex. hearings, reviewing proposals) makes for a more efficient process which in part contributes to its efficacy.[158] Interestingly, the highest ranking for this attribute on the EAOGRAM is the inclusion of legal recourse by proponents or interested parties when a government fails to meet stipulated time limits.[159]

The ability of an EA system to adapt to changing circumstances within the process or to specific projects is vital to effective EA. This **Living Process** metric reflects an EA process that adapts to new and changing scientific information, public involvement/expectations and has a continuous iterative approach. The scoring for this attribute weighs heavily on the ability of the process to respond to changing circumstances throughout. The highest score is for a dynamic approach to the science based needs of EA and responding to the social input but maintaining that flexibility in the context of institutional procedures. These differing approaches to policy have to be balanced in EA and the ability of the province to accomplish that scores highly on this metric.

Another important metric of EA effectiveness is **value for money**. Although the ultimate purpose of EA is not necessarily the resources used to complete it but meaningful input in the decision making process, it is still an important consideration in the name of effectiveness.[160] Unsurprisingly, proponents often complain that EA is an impediment to growth and unnecessarily complicated. As a result, this attribute was included to reflect the best possible EA results with the lowest possible resource inputs. Alberta and BC have the most cost effective of all jurisdictions in part owning to political will, to thin out the EA process, but also because the

[157] Ibid. 29.
[158] Ibid. 30.
[159] Ibid.
[160] Ibid. 31.

majority of large scale economic activity in those regions have significant impacts on the environment and thus a cost effective EA process was implemented.[161] The degree to which it succeeds in delivering on that process will be discussed.

The final attribute, is the rather general notion of **achieving environmental sustainability**. This attribute is tied closely to the first in that, often an EA systems' explicit goals are to promote sustainability.[162] Only BC does not explicitly do so in their legislation. This makes the evaluation of this attribute rather simple; does the process help it attain its goals? The broad nature of sustainability makes it difficult to enshrine but it encompasses the protection of people and the environment and results are apparent for all levels of activity or widely perceived as such across all dimensions.[163] Such generality might make it difficult to assess but ultimately, if the objectives in the first attribute are well laid out, it also creates the rubric by which to evaluate this metric.

CHAPTER 3: Practices of Municipal Environmental Impact Assessment

The difference of approaches to EA systems in each province affects not only the way EA is performed but the way in which the process is understood. If a province positions EA as a tool for planning, informing or environmental management it drastically affects the way the process proceeds. One of the clearest ways to see this and the basis for comparing provincial EA systems on an equal platform is through their approach to municipal EA. The most common forms of EA is municipal EA. The frequency with which routine projects such infrastructure maintenance are undertaken is so high that each province has developed a unique and often explained streamlined approach to this form of EA. It is calculable, well understood impacts and greatly simplify the process. Some municipal EA is orchestrated under the same process and requirements as individual EA assessments however, usually of Municipal EA entails a shorter version of the process to simplify the process while maintaining efficacy.

[161] Ibid.
[162] Ibid. 33.
[163] Ibid.

Furthermore, to aid in a comparative analysis of multiple municipal EA systems, it is beneficial to consider how municipal EA typically differs each province based on case studies that exemplify municipal practices. Each case study is specific to how the province approaches road extension projects because of their common use and shared approach across provincial lines. Road extension projects are common across Canada and thus serve as an excellent baseline project by which to evaluate the EA process. In the case of British Columbia, Saskatchewan and Manitoba, the municipal process is identical to the individual EA process however the degree is defined in a strict categorization that requires less of the project fitting it into a "routine designation."[164] Each section of this chapter is the explanation of each province's municipal EA system and a case study to illustrate that process for understanding. The exception is Alberta which is touched on more generally with anecdotal reference to EA case studies because of the limits to public access in public infrastructure under the current EPEA. [165]

3.1 British Columbia

British Columbia which recently moved from a prescriptive command and control approach to EA has opted for a focus on limiting government and simplifying the EA process with stricter timelines. This is well reflected in the municipal process. The average length of EA has fallen roughly 22% since the 2002 amendments to the BC EAA.[166] This to a degree had the intended effect of "enabling a streamlined process… to ensure EAs are more focused and cost effective while remaining thorough and accountable."[167] This streamlining process has particularly clear effects on public projects which often fall on the lowest rungs of the *Reviewable Projects Regulation*.[168] This regulation explains what kinds of projects require an EA and the form of such assessment. It includes public projects such as highways. The definition of a public highway according to the *Reviewable Projects Regulation* is "a road, street, lane, bridge or right of way designed or intended for

[164] "Manitoba Environment Act." *Manitoba Environment Act*. Queen's Printer of Manitoba. 1987.
[165] IAIA. Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness. IAIA, 2003.
[166] British Columbia. Environmental Assessment Office. *Environmental Assessment Office User Guide*. 2015.
[167] Ibid.
[168] British Columbia. *Proposed Amendments to the Environmental Assessment Reviewable Projects Regulation*. Section 16. Table 14, Transportation Projects. 2002.

use by the general public for the passage of vehicles, but does not include a private road."[169] Projects that fall in the purview of municipalities are laid out in the RPR and the listed requirements include the length and buffers and requirements of the road. Our case study is a small road extension of 23km in the rural area of Greenville, BC and illustrates the simplified process of EA under the RPR.

CASE STUDY: Greenville-Kincolith Road Project

British Columbia is a quickly expanding province with an abundance of rivers, lakes and resources. It is also one of the fastest growing provinces in Canada. This makes the development of roads and extensions both common and necessary. The Greenville-Kincolith project is a simple road extension project that reflects a common development in the province and illustrates how it fits into the EA system.

In 2003, the Ministry of Transportation and Highways, a provincial agency, applied to the EAO to build a 23km two lane gravel road along the north side of the Nass River from the village of Greenville to Mill Bay in the town of Kincolith, an isolated Nisga's village of about 1700 people. Its functional classification is a minor road with low volume.[170] Under the RPR it is considered a 'new project' and subject to "assessment of a new facility under subsection (1)… it does not include the dismantling and abandonment phases."[171] Most project types such as water management projects have four columns of increasingly stringent assessment phases to consider. Water management projects specifically including dismantling and abandonment phases. Public highways however, do not include this phase, it simply stipulates that a new project greater than 20km in length will apply to the EAA.[172]

The Greenville-Kincolith road is 23km and thus applies to the EAA. The Ministry of Transportation and Highways has noted that the road will "encroach on more than 1000 metres of linear shoreline along the Nass River."[173] The extent of infilling required necessitates an approval certificate under the EA act. Similarly, under the RPR "the EA process includes a review of the operations phase of the project but does not require the

[169] Ibid.
[170] "Greenville to Kincolith Road Project." *EAO Project Information and Collaboration*. EAO, 1999.
[171] Ibid. Greenville to Kincolith Road Project Report, submitted by Ministry of Highways and Transportation. 33.
[172] British Columbia. Environmental Assessment Office. *Proposed Amendments to the Environmental Assessment Reviewable Projects Regulation*. Environmental Assessment Office, 2002.
[173] "Greenville to Kincolith Road Project." *EAO Project Information and Collaboration*. EAO, 1999. Report submitted to EAO. 22.

project to develop plans for the permanent long-term dismantling or abandonment phases of their projects."[174] The road also crosses several rivers which is applicable under federal EA, but under the Canada-British Columbia Agreement, a federal-provincial cooperation agreement, the road given its size and perceived effects remains a provincial EA.[175]

The design of the study includes specifications for infilling and road design, especially during the construction process, including "disposal of waste rock from rock cuts, location for disposal."[176] The clauses for fisheries and wildlife are also specified. Interestingly, because the project directly connects to Kincolith, and a First Nations village, there special attention paid to First Nations input, and a document of comments was left in the EAO registry.[177] However, this is juxtaposed by the fact there was no public comment periods. The Minister has the power to bypass public comment periods depending on the project. Typically, there are not public comments available on the EAO registry regarding small road extensions such as Greenville-Kilcolith.

Despite limited public participation in the process, except for direct letters to the agencies involved, a project committee was established to evaluate the design and their conclusions focussed on the "ensured road alignment as it relates to infill along the lower Nass… and road pullouts…such as scenic road pull outs."[178] The process took 13 months and certification was approved in August 1999.[179]

3.2 Alberta

Alberta's fast paced and very streamlined approach to EA is apparent and it is usually only applied in its full capacity to large scale projects that have to do with energy.[180] The process for smaller public infrastructure projects such as road maintenance are partial victims of this very centralized and closed off process. The EPEA sets out the regulations for EA in Alberta and in the *Environmental Assessment (Mandatory and Exempted*

[174] British Columbia. Environmental Assessment Office. *Proposed Amendments to the Environmental Assessment Reviewable Projects Regulation*. Environmental Assessment Office, 2002. Section 16, Table 14. Transportation Projects.
[175] Ibid.
[176] "Greenville to Kincolith Road Project." *EAO Project Information and Collaboration*. EAO, 1999. Report submitted to EAO. 121.
[177] "Greenville to Kincolith Road Project." *EAO Project Information and Collaboration*. EAO, 1999. Comments Submitted to EAO. 1.
[178] Greenville to Kincolith Road Project." *EAO Project Information and Collaboration*. EAO, 1999. GREENVILLE-KINCOLITH ROAD PROJECT FINAL PROJECT REPORT SPECIFICATIONS. 7.
[179] Greenville to Kincolith Road Project." *EAO Project Information and Collaboration*. EAO, 1999. Certificate Issued.
[180] Creasey, Roger and Kevin S. Hanna. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 318

Activities) Regulation it explains that projects in Alberta are broken into schedule 1 and schedule 2 activities.[181] The typical individual assessments for large projects in energy and pulp and paper are schedule 1 activities and fully subject to the EPEA. However, an interesting exception is made for schedule 2 activities which include most public infrastructure, "[a] proposed activity listed in Schedule 2 is exempt from Part 2, Division 1 of the Act. (the EPEA)."

The issue of interest in this clause is part 2, division 1 of the EPEA. That section is titled the *Register of Environmental Assessment Information*. *According* to the section, "2(1) The Director shall keep in the register referred to in section 56 of the Act the following documents and information, where applicable, in respect of each proposed activity dealt with under Part 2, Division 1 of the Act."[182] This effectively makes public infrastructure projects and those not deemed significant projects are both not subject to individual EA regulation they are also not required to share the project with the public if necessary. This lack of transparency is discouraging and begs the question what such infrastructure development requirements exist if any. Despite this lack of transparency in the area of EA, there is some information from Alberta's municipal affairs that seems attempts to achieve some broader goal of sustainability. As Alberta's Municipal Affairs office explains, "[s]ustainable, responsive, and accountable municipal governments remain a key element in ensuring a prosperous province, now and into the future. In recognition of this reality, Alberta Municipal Affairs and the province's major municipal associations have partnered on the development of this Self-Assessment Questionnaire."[183] This questionnaire seeks to "improve sustainability practices in the province,"[184] and suggests an alternative approach to local environmental policy other than EA. However, at the broader provincial level, urban infrastructure in the province is similar to the rest of Canada so the lack of transparency seems less likely to be guilty of ineffective or adverse environmental policy but rather only to limit public information. According to the *Preparation of Disclosure Documents for Environmental Assessment Screenings,*

[181] Alberta. Legislative Assembly. *Environmental Protection and Enhancement Act*. 2014. Section 2(1)
[182] Ibid.
[183] Alberta. Government of Alberta. *Environmental Assessment Program: Preparing Disclosure Documents for Environmental Assessment Screenings*. 2010. 27.
[184] Ibid. 28.

*"*activities not specifically listed in the Regulation are called discretionary projects."[185] The director of Alberta environment determines if a schedule 2 project requires an EA or some partial process of EA. These variable requirements are difficult to evaluate because they are dependent on project by project discretionary power and because the information about public infrastructure in the province is not openly available. A registry of EAs for the province is available and extensive in each large-scale schedule 1 project but information is greatly limited as it relates to municipal infrastructure.[186] For the purposes of this paper, the EAOGRAM will evaluate Alberta EA process with the consideration of a lack of transparency. Despite the limits to a case study in Alberta, Creasy states that "lower scale projects often utilize analogue approaches as was the case prior to the EPEA… the minister and regional offices set the requirements which are reflective of similar road projects."[187] This striking difference in accountability and robust approach to EA is more reflective of "conflicted political will"[188] rather than a poor EA design. A complete individual assessment would be unnecessary for municipal projects but nonetheless, the lack of transparency and limited public participation in municipal matters is striking and reveals an uncertainty about the process in an otherwise centralized EA regime.

3.3 Saskatchewan

Saskatchewan's approach to municipal EA is not very different from its approach to private and large scale projects in the province. Public infrastructure projects are subject to the Saskatchewan Environmental Assessment Act (SKEAA) the same as any other project. Rather than a list of designated project types, the province has opted for projects to fall under the criterion of environmental significance rather than a scheduled list of projects with requirements. Section 2(d) of the SKEAA sets out 6 criteria for which if any are triggered can result in the project being designated as a 'development' and thus subject to EA.[189]

[185] Ibid.
[186] "Environmental Site Assessment Repository (ESAR)." *Alberta Environment and Parks - Environmental Site Assessment Repository*. ESAR. 2016.
[187] Creasey, Roger and Kevin S. Hanna. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 331.
[188] Ibid. 332.
[189] Saskatchewan. Environmental Assessment Branch. *Guide to Assessing Projects and Preparing Proposals under the Environmental Assessment Act*. Government of Saskatchewan. 2015.

i. Have an effect on unique, rare or endangered feature of the environment;
ii. Substantially utilize any provincial resource and in so doing pre-empt the use, or potential use, of that resource for any other purpose;
iii. Cause the emission of any pollutants or create by-products, residual or waste products which require handling and disposal in a manner that is not regulated by any other Act or regulation;
iv. Cause widespread public concern because of potential environmental changes;
v. Involve a new technology that is concerned with resource utilization and that may induce significant environmental changes; or
vi. Have a significant impact on the environment or necessitate a further development which is likely to have a significant impact on the environment.[190]

The province has created a very detailed guideline document called *A Guide to Assessing Projects and Preparing Proposals under the Environmental Assessment Act.* It explains how each of these six criteria can be triggered and result in an assessment, however it is also dependent on the Director of Environment to make the final decision about EA applications.

This approach to EA is unique in Canada as most provinces set out schedules or tables that explain the requirements for different project types. Saskatchewan instead uses an older format of a variable case by case basis that decides that "if a clause of section 2(d) of the SKEAA is violated therefore an EA is required."[191] Depending on the size and context of the project public infrastructure such as public highways are equally applicable to the EAA as any private enterprise. This is praised by many illustrating, "the latitude of the EA process,"[192] and particularly for "ensuring each province is evaluated equally… independent of the project type for triggering of an EA."[193] The case study examined is a 54km highway completed by the Saskatchewan Ministry of Highways in July of 2016.

CASE STUDY: Highway 914 Extension and Key Lake By-pass Project

In July of 2016, the Ministry of Highways and Infrastructure (MHI) began the proposal for a highway extension project undergone by the Saskatchewan Ministry of Highways, for a 54km highway extension between highway 914 and the key lake bypass project.[194] The project consisted of two main components,

[190] Saskatchewan. Government of Saskatchewan. *Environment Assessment Act*. Regina: Saskatchewan Environment, 1989.
[191] Ibid. Section 2(d).
[192] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*. 2016. 340.

[193] Ibid.
[194] Saskatchewan. Saskatchewan Ministry of Highways. *Saskatchewan Ministry of Highways - Highway 914 Extension and Key Lake By-pass Project*. 2016. 13.

construction and operation of approximately 51 to 54 km of all-weather roadway that will extend Highway 914 starting near the McArthur River mine site and the extension of an existing road near the Cigar Lake mine site in northern Saskatchewan. Under section 2(d) of the SKEAA the project was deemed a 'development,' primarily for the 6th clause, having a significant impact on the environment or necessitating a further development which is likely to have a significant impact on the environment.[195] This project is larger than a typical municipal infrastructure and engaged the individual EA process in the province, but it is the same process and course of action for small municipal projects. Similar to Alberta, projects that are not deemed a 'development' are not required to be posted publicly nor are they subject to individual EA, though does not mean they are not subject to some form of environmental regulation. According to Marie Ann Bowden and Bert Weichel "the requirements for a project are stipulated by the EAB, and specific to the context of the project… preapproval is granted by the minister if deemed…not to have significant impacts and allows small projects…such as municipal infrastructure," to proceed.[196]

It is then, still worth considering EA of a larger project such as the highway 914 extension, which completed a full EA in Saskatchewan. The requirements for the project came from a guideline document developed by the EAB. It included two public hearings, one of which took place in February 2010. Public notice was also made on the Saskatchewan registry, which is simply a collection of ongoing or recently completed individual EAs. The notice is dated for October, 2010 and granted approval in July 2011. This is currently the furthest northern reaching segment of the highway connecting the McArthur Uranium mine and other mines to the highway network.[197]

3.4 Manitoba

Manitoba has a very robust EA system with significant elements in cumulative assessment and one of the more progressive EA systems in Canada. It is clearly well organized and the 3 levels of classification for

[195] Ibid. 8.
[196] Saskatchewan. Government of Saskatchewan. *Environment Assessment Act*. Regina: Saskatchewan Environment, 1989.
[197] Saskatchewan. Saskatchewan Ministry of Highways. *Saskatchewan Ministry of Highways - Highway 914 Extension and Key Lake By-pass Project*. 2016. 93.

designated projects seek to create pathways to make EA projects with lesser or less understood impacts more quickly able to pass through the system while seeking feedback to inform the decision-making process. Since the EA process in Manitoba applies to public and private projects, a fact often celebrated and advertised by the government, municipal EA is administrated through the same individual EA process as other forms of EA. All projects then fall on a class 1-3. Municipal projects however typically do not attain Class 3 status which is likely to make every mandatory aspect of the process described in **section 1.1** applicable, as well as requiring greater attention to public involvement and scientific scrutiny.[198]

However, this is typically not the case, routine municipal infrastructure projects such as road maintenance remains a class 1 project. Road extension however, depending on the location and potential for adverse impacts are designated class 2. In fact section 11.1 of the Manitoba Act specifies that if after the first round of public hearings, if so deemed by the minister and given in writing, can forward an application to the approval stage, although this rarely takes place.

"If a public hearing has been held or is to be held by the commission in respect of a proposal for a Class 1 or 2 development, the minister may, after giving written notice to the director and the proponent… in the case of a Class 1 or Class 2 development, exercise the director's powers to issue a licence or refuse to issue a licence under clause 10(8)(a) or (b) and perform the director's duties under subsections 10(9) and (10)"[199]

The classification system in the MEA has been met with some criticism. The Manitoba Law Reform Commission explains, that "despite the classification between projects…there is a great degree of discretion and variability in the process… especially class 1 projects where the greatest discretion to fast track parts of the process… are most prevalent."[200] This is a common issue with Canadian EA and many criticize the latitude of ministers and EA officials for their authority to ultimately influence a decision, which can sometimes have the affect of undermining the legitimacy of the process. The case study we will consider is a class 2 assessment of a public road extension with drainage and under pass over ecologically sensitive area.[201]

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[198] Manitoba Environment Act." *Manitoba Environment Act*. Queen's Printer of Manitoba, 1987. Web.
[199] Ibid.
[200] "MANITOBA'S ENVIRONMENTAL ASSESSMENT AND LICENSING REGIME." Manitoba Law Reform. *Manitoba Law Reform Commission*, Jan. 2014. 61.
[201] Manitoba. Department of Environment. *PTH 110 Roadway Link from PR 457 to PTH 1 (Brandon Eastern Access)*. Manitoba Infrastructure and Transportation. 2009.

CASE STUDY: Extension of PTH 110 as a two lane roadway, R.M. of Cornwallis

In 2009, Manitoba Infrastructure and Transportation filed a proposal to the Department of Conservation for a two-lane roadway extension of PTH 110 from PR 457 to PTH 1. Its proposed length is between 30 and 50km and necessary in its attempt to "address the current road deficiencies, improve safety and accommodate the traffic volume on the east side of Brandon."[202] The project also consists of a drainage system, and an underpass structure for the CPR.[203]

The project itself falls under a class 2 development on the Manitoba Environment Act under Transportation and Transmission.[204] The process is therefore very similar to the individual EA assessment. It was given one public hearing period as a second or third is not required and is at the discretion of the Director of Environment. Typical of class 1 and municipal projects, the 30 day comment period is all that is required. In this project, no public comments were received but the summary of the project identifies that it advertised the project and public comment period in the local newspaper, the "Brandon Sun"[205] as well as the "Millennium public library, eco-network and western Manitoba regional library public registries."[206] In addition to public comments, the technical advisory committee which consisted of several provincial branches, such as the Parks and Natural Areas Branch, Sustainable Resource Management Branch, Historic Resources Branch (HBR), Mines and Energy and Climate Change Strategy Initiative."[207] The only agencies to raise concerns was the medical health officer concerned with safety precautions during the construction process and the historic resources branch which requested a heritage resource impact assessment, which was granted to be approved by the HRB prior to construction.[208] The proposal was filed in February of 2009 and granted approval in April of 2009. This particular case was quite simple and once designated a class 2 project it very quickly made its way

[202] Ibid. 1.
[203] Ibid. 2.
[204] Manitoba Environment Act." *Manitoba Environment Act*. Queen's Printer of Manitoba, 1987. Section 10.
[205] Manitoba. Department of Environment. *PTH 110 Roadway Link from PR 457 to PTH 1 (Brandon Eastern Access)*. Manitoba Infrastructure and Transportation. 2009.
[206] Ibid 3.
[207] Ibid.
[208] Ibid.

through the EA process. Notably, the lack of public comments allowed many of the discretionary steps such as a public hearing to be avoided likely because it was not necessary. This project exemplifies the streamline and efficient nature of Manitoba's EA process. For more complex projects perhaps the speed at which the process proceeds would not be deemed a benefit as it may indicate a lack of thoroughness during the process. However, this is not such a case, and bodes well for a straightforward table of project types and thresholds.

3.5 Ontario

Ontario has a unique approach to municipal EA relative to the other provinces. Instead of subjecting all municipal projects a lesser or equal variation of an individual assessment, Ontario uses several blanket class environmental assessments where most municipal projects can apply under one of 11 class assessments.[209] There is also a mechanism if a more stringent EA process is warranted and a project exceeds the parameters of a class EA to be 'bumped up' for an individual EA to apply. This is also called a part II order. The system is designed to ensure "efficiency and streamline EAs in routine projects with predictable outcomes."[210] There are 11 class EAs.

1. Municipal Engineer's Association Municipal Class Environmental Assessment
2. Ministry of Natural Resources Class Environmental Assessment for Timber Management on Crown Lands
3. MNR CEA for Small Scale Projects
4. MNR CEA for Parks and Conservation Reserves
5. Ministry of Transportation CEA for Provincial Transportation Facilities
6. Go Transit CEA Document
7. Ontario Realty Corporation CEA for Modifications for Realty Activities
8. Ontario Power Generation CEA for Hydroelectric Facilities
9. Ontario Power Generation CEA for Shoreline and Riverbank Modifications
10. Hydro One CEA for Transmission Facilities
11. Conservation Authorities of Ontario CEA for Remedial Flood and Erosion Control Projects[211]

These 11 class EA documents are called 'parent EAs.' The requirements, and terms for approval are set out in each of the 11 documents, so when a project that fits under one of them applies for approval, rather than carrying out an EA process that may result in the same or similar outcomes, they can satisfy the requirements

[209] Ontario. Ministry of Environment. *Ontario Environmental Assessment Act*. Toronto: Government of Ontario, 1990. PART II. Class Environmental Assessments.
[210] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2016. 362.

[211] Ontario. Ministry of Environment. *Ontario Environmental Assessment Act*. Toronto: Government of Ontario, 1990. PART II. Class Environmental Assessments.

under one of these documents and be granted approval with a much shorter process.[212] However, it is not uncommon for the part II order to be used and a project enter an individual EA process.

CASE STUDY: Arvin Avenue Extension Municipal Class Environmental Assessment

Ontario's Class EA system is a unique system and revolves around 'streamlining the EA process.' The word streamline focusses on limiting the number of steps in the EA process and attempting to cut down redundancies.[213] This illustrated by the Arvin Avenue Extension Municipal Class Environmental Assessment project. In 2008, the Public Works Department for the City of Hamilton filed for an extension and connection road to "contribute to the extension and completion of the transportation network to allow for…serviced industrial land in Stoney Creek Industrial park as well as the rest of Hamilton."[214]

The project was completed under the *Municipal Engineers Association (MEA) Municipal Class Environmental Assessment*, a parent class EA that is usually used for infrastructure specific to roads and local infrastructure.[215] Within this assessment there are schedules that apply specific requirements on the project and are designated for certain projects. These include if the project is a new development, requires that the public be notified or if it is simply maintenance activity.[216] This extension, being a new development falls on Schedule C of the MCEA. This means that it is a new project and will be considered for alternatives and the full extent of a class EA, which again is far less complex than the individual EA assessment. Several alternatives were considered, including no changes, operational improvements on nearby roadways rather than the project, expanding transit and widening existing roads. All were explained in the summary not be the most "beneficial option for the region."[217] This was in part decided by the 'triple bottom line' commitment common in class EAs. It evaluates community well-being, environmental wellbeing and economic wellbeing. To a degree this evaluation proposes an attempt to encourage more effective EA practice and to a degree, explicitly promote

[212] "Preparing Environmental Assessments." Ministry of Environment. Government of Ontario. 2017.
[213] Ibid.
[214] Ontario. Public Works Department. Capital Planning and Implementation Division. *Arvin Avenue Extension Municipal Class Environmental Assessment (PW09002) - (Ward 11)*. Hamilton: City of Hamilton, 2008.
[215] Ontario. Ministry of Environment. *Ontario Environmental Assessment Act*. Toronto: Government of Ontario, 1990. PART II. Class Environmental Assessments.
[216] Ibid. Section 13.
[217] Ontario. Public Works Department. Capital Planning and Implementation Division. *Arvin Avenue Extension Municipal Class Environmental Assessment*. 2008. 2.

sustainability. Most other jurisdictions mention sustainability as an objective and imply engagement through the process and the triple bottom line attempts apply sustainability practices throughout. Public consultation took place in two rounds. Once through advertisements in public newspapers, the public information centre, and Stoney Creek news from April 20 to May 3 2008.[218] A second round was held between August 29 and September 5 2008. The comments primarily focussed on the design and route of the new road. Changes to the direction were altered as a result to a secondary design the proponent included in the original proposal. The project was granted approval in keeping with road designs and safety parameters, and the process took approximately 9 months to complete.[219] This is quite efficient relative some of the other provinces, it only bypasses the screening phase with a simple criterion to determine if the project fits into a class EA, but the clear requirements for these routine infrastructure projects does allow for a great volume of projects to be processed without becoming cumbersome to the MoE. However, there is the criticism that it is too specific and does not allow for much latitude in MCEAs to respond to unique contexts if there are any.[220] Though many suggest this is for the best, and if a project cannot neatly fit into a parent EA, then it best receive a part II order and complete an individual assessment.[221]

CHAPTER 4: Environmental Assessment Evaluation and EAOGRAM

As discussed in **section 2.1** the EAOGRAM is an evaluation tool used to assess the effectiveness of EA internationally. Its 10 criteria are based on international reports and literature that most contribute to effective practice.[222] Though renown for its efficacy in international use there are some limitations. The EAOGRAM was designed to evaluate internationally and the attributes reflect this broad approach to evaluation. Thus, it is to expected that the range of outcomes from one Canadian province to another is limited.[223] This is particularly

[218] Ibid. 4.
[219] Ibid.
[220] "Categorization in Discourse and Grammar." *Municipal Class Environmental Assessments Categorization Review Study*. *RCCAO*. Residential and Civil Construction Alliance of Ontario, 2012. 17.
[221] "Preparing Environmental Assessments." Ministry of Environment. Government of Ontario. 2017.
[222] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003.
[223] Ibid

true for municipal EA. However, where differences are noticed they are striking. This chapter presents the EAOGRAM evaluation of five Canadian provinces assessing the EA systems in place for provincial EA.

TABLE 2: Key to the EAOGRAM

Dimension Attributes	A	B	C	D	E
Clear Purpose and Goals/Direction	No Written Guidance	Policy and Procedures	Law, Policy And Procedures	C Plus Administrative Practices	D Plus Day to Day Problem Solving
Incorporates Long term and Overall Perspective	Bio-Physical and Project Specific	Biophysical and Socio-economic Project Specific	B plus Interjurisdictional Considerations	C Plus Cumulative Effects on Biodiversity	D plus Sustainability Considerations
Broad Scope of Application	EA on Large Projects Only	Process Matches To Significance Of Effects	Large and Small Projects	Projects, Plans and Programs	D plus Strategic EA
Responsive to Public/ Stakeholder Involvement	Information Dissemination	Consultation	Limited Participation	Broad Participation And Dispute Resolution	Principled Negotiation
Interjurisdictional Harmonization	EA Agency acts Alone	Within Jurisdiction Harmonization	Principles Applied to external Jurisdictions	Interjurisdictional Agreements	D plus International Conventions applied
Monitors Results and Responds to Findings	Relies on Complaints only	Proponent reports Periodically	Independent Sample Audits	Broad Compliance Monitoring	Broad Monitoring and Response
Certainty of Decision- Making	EA Input Optional to Decision Maker	EA Input Mandatory to Decision Maker	B Plus Limited Scheduling Of Activities	B Plus Detailed Scheduling of Activities	D Plus Recourse For Proponents
Living Process	Incorporates New EA Technologies	Incorporates EA Technologies and Public Involvement	Incorporates Changing Community Values	Responds to Improved Institutional Capacity	Can respond to all of the proceeding items
Provides Value for Money	Costly and Time Uncertainty		Moderately Efficient In Cost and Time		Cost- Effective Time Efficient

Achieves Environmental Sustainability	Benefits not evident to most		Benefits evidence on Large Projects		Benefits Readily Apparent

4.1 British Columbia

TABLE 3: EAOGRAM for British Columbia

EAOGRAM for British Columbia, 2017						
1	Clear Purpose and Goals/Direction	■	■	■	■	■
2	Incorporates Longterm and Overall Perspective	■	■	■	■	
3	Broad Scope of Application	■	■	■		
4	Responsive to Public/Stakeholder Involvement	■	■	■	■	
5	Interjurisdictional Harmonization	■	■	■	■	
6	Monitors Results and Responds to Findings	■	■	■		
7	Certainty of Decision Making	■	■	■	■	
8	Living Process	■	■	■	■	
9	Provides Value for Money	■	■	■	■	
10	Achieves Environmental Sustainability	■	■	■		
ATTRIBUTES OF EA EFFECTIVENESS		A	B	C	D	E
		DIMENSIONS				

British Columbia scored very well on the survey in part due to their clear requirements and regulations in EA and in their adaptiveness to the needs of the public and stakeholders. The purpose of EA explained in the BCEAA focuses on "sustainability and iterative project design… for better decision making."[224] This resulted in excellent scores in both the first and second attributes. Despite these benefits, there were some notable limits to public participation, not explicitly in any shortcomings of the process, but as "too great variability and discretionary powers"[225] of the EAO director, who can impose limits on public participation on all projects.[226]

[224] Rutherford, Murray B. "Impact Assessment under British Columbia's Environmental Impact Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2005. 298.
[225] Ibid. 315.
[226] Ibid.

Though there is not much interest from the public toward routine projects such as road extensions, the inclusion and active engagement of a public participation forum would have helped improve their rating. This is a recurring theme across Canada, that public participation, although at times arguably not as necessary for routine projects, the lack or discretionary circumvention of public engagement leaves room for improvement and a more inclusive EA process.

Due to plentiful natural resources in the province including the high number of waterways and rivers, the British Columbia- Canada Cooperation Agreement is very commonly used when a federal and provincial EA is triggered, though typically provincial EA takes responsibility, particularly when the proponent is from a provincial agency, such as the Ministry of Transportation and Highways.

The discretionary power of the EAO although greatly increasing the speed of the process can also be a hindrance to a transparent EA process that can be replicated, easily engaged, and spare the process from doubt of "fair application of EA practice."[227] However from the perspective of EA as an iterative process, decisions of the EAO greatly contributes to the betterment of EA practice, providing an excellent and responsive basis for a living process. Despite the significant improvements in EA with excellent regulatory frameworks such as the *Reviewable Projects Regulation* which give the BC EA system great breadth, it still suffers from a lack of mandatory public engagement mechanisms except for the highest profile projects, a variability in decision making and for that reason it was only able to score only moderately on the attribute of sustainability.

[227] CBC. "B.C.'s Environmental Assessment Office Slammed by A.G." *CBCnews*. CBC/Radio Canada, 07 July 2011.

4.2 Alberta

TABLE 4: EAOGRAM of Alberta, 2017

EAOGRAM for Alberta, 2017						
1	Clear Purpose and Goals/Direction					
2	Incorporates Longterm and Overall Perspective					
3	Broad Scope of Application					
4	Responsive to Public/Stakeholder Involvement					
5	Interjurisdictional Harmonization					
6	Monitors Results and Responds to Findings					
7	Certainty of Decision Making					
8	Living Process					
9	Provides Value for Money					
10	Achieves Environmental Sustainability					
ATTRIBUTES OF EA EFFECTIVENESS		A	B	C	D	E
		DIMENSIONS				

Alberta's robust approach to EA excelled in certain areas of the evaluation and floundered in others. A clear set of legislations in the EPEA lay out clear goals and objectives to inform the EA process, but still lack an inclusion of environmental degradation and a goal to minimize and only implies in the process not after the EA is complete.[228] The inclusion of a mechanism for cumulative EA, though seldom used, is a promising tool and though reflecting well on the process as a whole, suffers from its lack of use and supports some who argue that much of Alberta's EA regime, operates as a "green stamp."

Regardless, they are policy tools and are quite extensive. If a project is not a schedule 1 class development or a large-scale project Alberta Environment has great latitude in the EA process and is not

[228] Creasey, Roger and Kevin S. Hanna. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 320.

required to post or share the projects publicly.[229] The only exception is for a comment period or public hearing only once the project has been designated as a 'development.' Coupled with the fact that there is a limited EA registry again except for major EA projects there are far more questions than answers about the process of municipal EA in the province.

These limitations are juxtaposed against a rather rigorous decision making process for the projects that do become a schedule 1 development, or can and do engage in strategic EA. Moreover, the simplification of the process with strict and reliable timelines from the Alberta Environment, public comments and TAC reviews leaves the process quite efficient and valuable. However, it is in stark contrast to the policy tools that are not regularly used and the lack of transparency. These all contribute to the relative lack of sustainability in the province.[230] The very weak follow up process except for the potential for decommissioning the site, limitations to the scope of the application beyond just the project and continued limits on transparency of the process leaves much to be desired in terms of information and engagement from the EA process. The tools for effective EA in Alberta are for the most part present, but the political will to utilize them and affect changes to their approach keep the province in a stable but precarious state.

[229] Alberta. Legislative Assembly. *Environmental Protection and Enhancement Act*. Alberta Energy Regulator, 2014.
[230] Creasey, Roger and Kevin S. Hanna. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 329.

4.3 Saskatchewan

TABLE 5: EAOGRAM for Saskatchewan, 2017

EAOGRAM for Saskatchewan, 2017						
1	Clear Purpose and Goals/Direction					
2	Incorporates Longterm and Overall Perspective					
3	Broad Scope of Application					
4	Responsive to Public/Stakeholder Involvement					
5	Interjurisdictional Harmonization					
6	Monitors Results and Responds to Findings					
7	Certainty of Decision Making					
8	Living Process					
9	Provides Value for Money					
10	Achieves Environmental Sustainability					
ATTRIBUTES OF EA EFFECTIVENESS		A	B	C	D	E
		DIMENSIONS				

Saskatchewan despite having an EA regime that was lauded throughout the 1970s and to a degree many international groups today,[231] has several limitations. The province performed the most poorly on the EAOGRAM both in this assessment and in 1994 by the IAIA. The reason it was not able to score highly on more basic attributes like clear objectives or having long term perspective, is because the EA screening process is subjective. The six criteria laid out in the SKEAA, (see section 3.1[232]) are a series of conditions that if any are triggered can undergo assessment. However, ultimately the EAB makes that decision, before any public consultation can take place. Only once a project is deemed a development is it subject to EA scrutiny. In

[231] Australian and New Zealand Environment and Conservation Council (ANZECC). *A National Approach to Environmental Impact Assessment in Australia*. Canberra.

[232] "The Environmental Assessment Act." *Saskatchewan Environmental Assessment Act*. Government of Saskatchewan, 1980. Section 2(d)

addition to the uncertainty in attaining development status, the process itself still suffers from limits, including neither a separate cumulative nor strategic approach to EA.

Despite these limitations of public participation is mandatory and often includes more than one round of input.[233] The EAB, arbitrates the process allowing for great flexibility in the process and interjurisdictional developments, particularly with the Federal government common.[234] In municipal EA, the process is identical to individual EAs however the EAB typically has fewer requirements for the projects because of their small and predictable impacts. This has of course been met with much criticism mostly stemming from the fact that this EA process, despite being robust and inclusive, lacks several standard tools and subsidiary processes such as strategic assessment and a through categorization of requirements for the project.[235]

4.4 Manitoba

TABLE 6: EAOGRAM for Manitoba, 2017

EAOGRAM for Manitoba, 2017						
1	Clear Purpose and Goals/Direction	■	■	■	■	
2	Incorporates Long term and Overall Perspective	■	■	■		
3	Broad Scope of Application	■	■	■		
4	Responsive to Public/Stakeholder Involvement	■	■	■		
5	Interjurisdictional Harmonization	■	■	■	■	
6	Monitors Results and Responds to Findings	■	■	■		
7	Certainty of Decision Making	■	■			
8	Living Process	■	■	■	■	■
9	Provides Value for Money	■	■	■		
10	Achieves Environmental Sustainability	■	■			
ATTRIBUTES OF EA EFFECTIVENESS		A	B	C	D	E
		DIMENSIONS				

233
234
235

Manitoba has a very progressive EA regime in place, one of the best in the country.[236] It has an extensive list of project types and requirements as well as a thorough approach to responding to process changes or public input.[237] It is, however, oddly limited for its neglect of the term sustainability or applying it as goal or objective to the EA process in any capacity.[238] The *Manitoba Environment Act* positions itself as an information process and despite seeking to "minimize adverse impacts and negative consequences"[239] it is not specific to the iterative improvement of decision making processes to achieve greater sustainability. For this reason it scored quite low on the sustainability attribute.

Despite this shortcoming however, the province did much better in several other categories thanks to its very well centralized and clearly laid out regulations. In the *Guidelines to EA in Manitoba,* there is a clear explanation of the steps of the EA process though it does not describe that 2 of the 5 steps involving public participation and it is not mandatory that the minister is required gather more information. In any case, it is common practice to bypass these steps in municipal EA. It is also easy to engage the process and the registry contains large and small projects completed by the province. The *Manitoba Environment Act* itself breakdowns down all project types into class 1-3. The differences between these types are usually the stringency of the process and inclusion of greater information and project types. Nearly all project types in Manitoba are completed in class 1 or 2 categorization. Only the largest and provincial projects are considered for class 3. Municipal EA, particularly for routine projects is usually a class 1 project, but can often be upgraded to a class 2, however the discretionary powers of the minister often bypasses more than 1 round of public commenting, monitoring and abandonment phases. The completeness of discretionary powers in the EA process is the greatest limitation to the system and is the basis for why the province was only to able to score 'Cs' for many of the categories. In lieu of the director making decisions about the outcome of a project once in the process, some suggest that deferring to TOCs may be preferential to the director.[240]

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[236] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 2016. 346.
[237] "Manitoba Environment Act." *Manitoba Environment Act*. Queen's Printer of Manitoba, 1987. Section 1(1)
[238] Lobe, Kenton. "Environmental Assessment: Manitoba Approaches." *Environmental Impact Assessment: Practice and Participation*. 2016. 358.
[239] "Manitoba Environment Act." *Manitoba Environment Act*. Queen's Printer of Manitoba, 1987. Section 1(1)
[240] "MANITOBA'S ENVIRONMENTAL ASSESSMENT AND LICENSING REGIME." Manitoba Law Reform. *Manitoba Law Reform Commission*, Jan. 2014.

4.5 Ontario

TABLE 8: EAOGRAM for Ontario, 2017

EAOGRAM for Ontario, 2017						
1	Clear Purpose and Goals/Direction					
2	Incorporates Longterm and Overall Perspective					
3	Broad Scope of Application					
4	Responsive to Public/Stakeholder Involvement					
5	Interjurisdictional Harmonization					
6	Monitors Results and Responds to Findings					
7	Certainty of Decision Making					
8	Living Process					
9	Provides Value for Money					
10	Achieves Environmental Sustainability					
ATTRIBUTES OF EA EFFECTIVENESS		A	B	C	D	E
		DIMENSIONS				

Ontario takes great pride in its EA system. It is robust and operates clearly with several types and processes for a multitude of projects. This reputation is deserved to some degree because Ontario scored the highest on the EAOGRAM of the provinces. The EAA, in 1996 went through major reforms that streamlined the process and implemented several mandatory steps and processes that lay out clear purposes and goals throughout the process. Requirements for the TOR, regulated timelines which very commonly meet their deadlines on time, mandatory consultation and several appeal processes through the environmental review tribunal are a few of these changes that greatly enhanced the direction of the process and to a degree mandated public involvement throughout the process.[241] The province also scored very well on the scope of application and overall perspective measures because it of the specificity of the Class EA system. The 11 parent documents lay out the scope of each project and how those objectives fit into the over perspective of planning.

[241] Graci, Sonya. "The Ontario Environmental Assessment Act." *Environmental Impact Assessment: Practice and Participation*. 2016. 365.

The clear scope of application also leads to greater certainty in decision making as the steps are well organized by schedules 1 and 2 projects. This scheduling is also complimented by mechanisms for discretion by the EAAB, and the potential for recourse of decisions through the ERT or court systems.

There remains a limited approach to monitoring and follow up. Monitoring practices are stipulated by the EAAB but whether or not those requirements are carried out can often be left up to the proponent and issues raised by the public. Ultimately the reason why the process could not score higher in environmental sustainability was its lack of follow up and reliance on public outcry to resolve or adapt to projects and proponents.

Overall, Ontario has one of the most effective EA regimes in Canada and despite some systemic shortcomings in approach, it does attempt and to a fair degree succeed in approaching EA in a way that is conducive to effective practice.[242]

Chapter 5: Comparative Analysis of Provincial Approaches to Municipal EA

This chapter reflects on the outcomes from the EAOGRAM evaluation. It orders and compares the provinces juxtaposing their operations compared to one another while using the EAOGRAM as a means of improving the process. **Section 5.1** compares the provinces themselves and raises several commonalities and limitations of each province. **Section 5.2** describes general recommendations to future iterations in EA and comments on the performance of the provinces as a whole.

5.1 Comparisons and Lessons from the EAOGRAM

Evaluating policy regimes on a single metric like the EAOGRAM, despite its reputation as a robust international metric of evaluation is limited in some regards. Nonetheless, the evaluation of the EAOGRAM raised several interesting and unique qualities about these jurisdictions and several questions about their current

[242] Ibid.377.

approach and how iterations in the future may better encourage greater effectiveness. They also reveal how a strong approach to EA contributes to better results.

Despite many criticisms of Ontario's class EA system for being "too time consuming and expensive," Ontario managed to score the highest of the provinces considered, followed by British Columbia for its RPR and guidelines to municipal EA. Its clarity of purpose and procedure were well complemented by a flexibility to consider cumulative impacts and develop strategic approaches to assessment. Manitoba, scored very close to British Columbia but lacked the "overall perspective"[243] of EA owing in part to a lack of consideration of 'sustainable development' as an objective, and a lack of decision making certainties leaving great discretion to the Director. Alberta's robust EA regime of detailed regulations and schedules as well as the efficient and timely nature of the process scored quite well in some attributes. However, the lack the accountability, public engagement, the discretionary powers of the minister, and the limited scope resulted in its current iteration. Finally, Saskatchewan, scored lowest on the EAOGRAM. This is somewhat ironic given the international recognition the regime received when first introduced in 1981. The regime functions well, but it lacks any prescriptive backing related to screening, or scoping and only a few schedules on how to approach a project.[244] It heavily relies on analogue approaches, which although itself is not a problem, is in many regards the only form of consistent EA practice from project to project. The "barebones approach of the act…with few regulations or standards,"[245] ultimately undermines the process. It seems that the lack of iterative improvement of any sort has resulted in several inadequacies in its function today. However, arguably the reason why no action has been taken on it in the last few decades is exactly because its function. Despite shortcomings in regulation, public participation, value, time and certainty, in relativity, it is still quite functional.

Across all five provinces, it seemed that the purpose, objectives and goals of the process in EA was clearly explained in the corresponding EAA. All of them took care to consider EA as not just a means of

[243] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. Rep. Mississauga: IAIA, 2003.
[244] Saskatchewan. Environmental Assessment Branch. *Guide to Assessing Projects and Preparing Proposals under the Environmental Assessment Act*. Government of Saskatchewan.
[245] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*. 2016. 357.

environmental protection or information gathering but an iterative process that seeks to improve decision making. British Columbia and Ontario explicitly describe EAs as a "process to identify and assess the potential effects that may result from development of a proposed project… to provide an opportunity for a project to be modified before irreversible design projects are implemented… results in improved project design to help avoid costly mistakes for proponents, government, local communities and the environment."[246] Manitoba surprisingly, in spite of mirroring many of the approaches of BC and Ontario do not have explicit objectives in the MEAA that make any reference to improving decision making or sustainable development.[247] The reason it still scored as highly as the other two was because of its administrative practices and inclusion of a clear class system for project types.[248] This was common across the provinces that did not explicitly mention the environment or clearly define sustainability in their act, including Alberta and Manitoba. Despite this lack, the inclusion of clear schedules and project requirements that seek to minimize adverse impacts amount to relatively the same administrative practices. Perhaps the exclusion of these goals or terms were political concessions to affect the act, or to impose a legal limitation on the what the EAA sets out to accomplish.[249] This is in part why the practice of strategic or cumulative assessment across the provinces is somewhat scarce, despite continued encouragement of these tools in EA. Despite these shortcomings, each province was able to score at least a D on the EAOGRAM with the exception of Saskatchewan for its subjective clauses for environmental assessment. To score an E rating would require, "administrative practices, law, policy and procedures… plus day to day problem solving."[250] The question of how necessary these problem-solving mechanisms are, depend on the project and context. In the case of municipal EA, day to day problem solving processes may not be necessary in routine projects however, large scale projects or those to which more than a municipal process would apply, it may be beneficial for EA regimes to include some function other than the periodic discretion of the minister to deal with day to day issues and information.

[246] "Environmental Assessment Act." *Environmental Assessment Act*. Queen's Printer Press, 2002.
[247] MANITOBA'S ENVIRONMENTAL ASSESSMENT AND LICENSING REGIME." Manitoba Law Reform. *Manitoba Law Reform Commission*, Jan. 2014. 12.
[248] Ibid.
[249] Ibid. 34.
[250] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003.

Another vital consideration raised by academics such as Bram Noble, considered to be the basis of sustainable and effective EA, is "long term perspective" of the project. In the form of "broad socio-economic considerations, interjurisdictional, cumulative effects and sustainability considerations," sustainability and improvements in EA can be made. Many of the provinces easily qualified for a D rating with the exception of Manitoba and Saskatchewan for their lack of sustainability considerations.[251] The prairie provinces in many regards, "have fewer regulatory mandates…and greater latitude in discretionary functions," than the other provinces. There is not a very effective cumulative assessment process in these provinces which is particularly troubling in Saskatchewan, where "greater interests…in energy…oil sands and natural gas…are increasingly present."[252] The inclusion of sustainable development in the EAA and its application in the process would be greatly enhance the process. Similarly in Manitoba there are significant "pulp and paper industries in the north of [Manitoba] which have great effect on the surrounding region… and environment… This will require greater consideration of cumulative effects and how to address them."[253] Cumulative assessment through a separate process rather than implied in the requirements would be beneficial. The other provinces which already have a cumulative assessment process or consideration, to score an 'E' rating would need greater attention to 'sustainability considerations,' or those considerations that focus on "improving the relationship between environmental components and the public."[254] The focus rather than simply being on conservation or economic growth is to promote greater inclusivity between the two.[255] This manifests in the "process of iteratively improving the decisions within EA…to achieve greater sustainability."[256] The provinces despite having a very responsive process, do not ultimately have clauses to improve that process. This may be more than a regulatory body can deliver and so "periodic review of EA processes"[257] are often suggested as an alternative. Ontario and

[251] Manitoba and Saskatchewan Environmental Assessment Acts lack explicit definition of sustainability or its function in EA.
[252] Bowden, Marie Ann and Bert Weichel. "Environmental Impact Assessment in Saskatchewan." *Environmental Impact Assessment: Practice and Participation*. Don Mills, Ontario: Oxford UP, 2016. 341.
[253] Ibid. 344.
[254] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003. 27.
[255] Ibid.
[256] Ibid. 33.
[257] Canter, Larry W., and Barry Sadler. *A Tool Kit for Effective EIA Practice: Review of Methods and Perspectives on Their Application: A Supplementary Report of the International Study of the Effectiveness of Environmental Assessment*. 1997. 27.

British Columbia both have such review processes but take place every 5 years and at times longer with only marginal improvements.[258]

Despite the excellent scores across the provinces one of the most vital areas where most provinces showed some limitations was in public participation. All the provinces with the exception of Ontario and BC scored a 'C' rating with "limited participation."[259] All provinces in Canada have some form of public participation and mandate advertisement of EAs to the public, however, in some cases there are some questionable caveats. Most significantly, Alberta, despite its intensive legislative EA regime and project schedules has a detrimental approach to public participation.[260] Most notably and as discussed in **section 2.2**, Alberta, in the *Mandatory and Exempted Activities* regulation stipulates that if a project falls below a certain scheduled threshold, the project is not required to be reported on the provincial registry. This is 'concerning' to many and a suspicious approach to others. These exempt activities identify as a schedule 2 project and only require public participation as deemed required by the director of the corresponding regional office. The project types that fall on this list are not included, but the project types for large scale schedule 1 projects are included.[261] In this way, it seems that all projects that do not fall on this list qualify for exemption from the mandatory functions of EA in the province, in that they become discretionary and are exempt from public advertisement.[262] This by itself would have seen Alberta fall far lower on the EAOGRAM, but because schedule 1 and the process itself includes all major projects in a province where the majority of significant projects are based in energy, most of them qualify for the EA process and allows the otherwise effective EA process in the province to function quite well.

Despite these shortcomings, Alberta's public engagement is according to the EAOGRAM as limited as the other provinces, in that public consultation usually takes one round early in the process in an effort to "allow for public opinion to be accounted…to provide the opportunity for a project to be modified before irreversible

[258] *Environmental Assessment in British Columbia*. Environmental Law Centre. University of Victoria, Nov. 2010. AND Ontario. Ministry of Environment. *Ontario Environmental Assessment Act*. Toronto: Government of Ontario, 1990.
[259] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003. 24.
[260] "Environmental Assessment (Mandatory and Exempted Activities) Regulation." *Environmental Assessment (Mandatory and Exempted Activities) Regulation*. Government of Alberta. 2010. Section 8.
[261] Ibid. Section 5.
[262] Ibid. Section 8.

project design and construction decisions are made."[263] However, this can end up being "the most significant…or only opportunity for the public to voice concern,"[264] this leaves a lack of consideration of public participation later in the project once "designs flaws… if any… are revealed and…the public are able to continue to engage with the process."[265] The remedy for this issue for provinces like BC and Ontario is to include multiple rounds of public consultation including more as prescribed by the director of environment."[266] How a jurisdiction balances their regulatory processes to promote certain decision making with discretionary power as in the case with public participation is always a challenge in EA administration, and in this study, the provinces clearly have mandated public participation but with rigid limits. However, there are also discretionary tools available to ministers and directors of EA to further their engagement with the public, typically contingent on interest by the public.[267]

In addition to limitations in public participation, all provinces suffered in monitoring results and responding to findings. In the case of Alberta, Saskatchewan and Ontario, which scored a B rating, typical monitoring approaches, are "limited to…proponents periodically reporting findings to the [responsible authorities]."[268] This self assessment approach despite being adopted across much of Canada, has great limits in enforcement and evaluating if a proponent successfully fulfills the requirements of the process. This is a vital limitation across Canada, and although some provinces do include some independent sample audits, none have a broad compliance or enforcement function which leaves much to be desired in how the project is carried out at the conclusion of the EA process. Outside of an enforcement or appeals process, with the exception of Ontario and the ERT, disagreements that are not resolved by the responsible authority may be able to find recourse in the courts. Better monitoring and implementation of EA requirements may be able to avert the need for appeals or punitive measures in future iterations of EA.

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[263] Creasey, Roger and Kevin S. Hanna. "Alberta: Environmental Impact Assessment in a Rapid Growth Setting." *Environmental Impact Assessment: Practice and Participation*. 2016. 323.
[264] Ibid.
[265] Ibid. 327.
[266] Noble, Bram F. "A State-of-practice Survey of Policy, Plan, and Program Assessment in Canadian Provinces." Environmental Impact Assessment Review 24.3. 2004. 353.
[267] Ibid. 356.
[268] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003. Appendix A.

5.2 Recommendations and Improving EA in the Future

Canada has a long-standing history of EA and has very effective EA regimes even among developed nations. The EAOGRAM far from simply being a measure of effectiveness is also designed to "encourage innovation…and ultimately amount to sustainability assessment."[269] According to Debora VanNijnatten [270] "prescriptive and command environmental policy… will further subsume sustainability objectives... moving toward a contextual process rather than prescription." This evaluation reveals that Canada has made great strides in efficiency, inclusiveness and developing a reliable process with which to evaluate development projects and prescribe improvements to ensure the protection of the environment. It does however, still suffer from limitations in engaging that process. Limits to public participation, scoping and the inclusion of significant components outside of the project are rigid. Depth to public participation involvement including some ongoing dispute resolution for all provinces would be very beneficial.

Saskatchewan, is the only province that does not categorize its 'developments' on a scheduled list of project and project types, instead of relying on the six clauses that trigger EA. The subjectivity of these clauses may be better served with a list in the future similar to Manitoba's class system, from 1-3. Manitoba however, could benefit from better defining the role of EA and include progressive concepts like sustainable development as an objective for their legislation.

In addition to greater consideration of sustainability, there is also a need for a far more engaged monitoring program for all provinces, not from a discretionary process, but perhaps from a greater prescriptive basis. In this case, "a checklist, or report based requirement by proponents,"[271] may be sufficient for most EA projects.

In the case of municipal EA, Ontario has the most robust and detailed approach to municipal EA in the class EA system, but performs comparatively to Manitoba and British Columbia. BC's *Reviewable Project*

[269] Ibid. 36.
[270] VanNijnatten, Debora. "The Struggle of the Canadian Federal Government to Institutionalize Sustainable Development." Canadian Environmental Policy and Politics: The Challenges of Austerity and Ambivalence. 2016.
[271] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003. 36.

Regulation is very effective at stipulating the requirements for routine projects and is likely a manageable improvement for Saskatchewan and Alberta. Saskatchewan lacks any substantial differentiation between individual EA and municipal EA which is can easily be improved with a schedule like BC or Ontario. Manitoba's classification system functions very well and is only slightly less absolute than BC in that a class 1 project which most projects fall under are specific to the project types, ex. "A roadway over 20km is a class 2 project."[272] Structural improvements such as these highlight the already efficient nature of EA in Canada. Although historically EA is regarded as a time-consuming process, most of the provinces have optimized the function of the process with timelines, analogue approaches, and discretionary work. Future iterations of EA should focus on improving the process of EA and encouraging greater engagement and oversight into projects to achieve greater objectives in sustainability.

Conclusions

Since its earliest implementation, EA has tended to improve over time with greater function and effectiveness despite political changes and interest. If this continues to be the trend, then EA will likely begin to resemble sustainability assessment as suggested by Robert Gibson, "trends in EA… increasingly… [are] moving toward a sustainable assessment based approach.[273] This paper furthers an understanding of the relationships, commonalities and differences between provincial EA policy regimes and develops an understanding of how EA operates in five jurisdictions unique from each other. The comparison of British Columbia, Alberta, Saskatchewan, Manitoba and Ontario on the EAOGRAM, an internationally recognized metric to measure and encourage EA effectiveness revealed some unique commonalities between the provinces and highlighted limitations in areas of effective EA that would benefit from greater attention. In addition to a general comparison of the provinces, special consideration was made for the approach to municipal EA and

[272] British Columbia. Environmental Assessment Office. *Proposed Amendments to the Environmental Assessment Reviewable Projects Regulation*. Environmental Assessment Office. 2002.
[273] VanNijnatten, Debora. "The Struggle of the Canadian Federal Government to Institutionalize Sustainable Development." Canadian Environmental Policy and Politics: The Challenges of Austerity and Ambivalence. 2016.

how each province approached its routine practices. Although municipal EA proved to be a clear subsidiary to the larger function of EA legislation in the province, this comparison revealed some striking limits to accountability from provinces like Alberta, a lack of broad engagement tools across Canada, and a lack of clear objectives in Manitoba's EA for a lack of sustainable development criterion. It also revealed the limits to monitoring and follow up in EA of which most provinces showed limitation. It simultaneously confirmed the stringent and organized approach of several provinces to EA project types and confirmed the adaptability of discretionary approaches to EA. Through the comparison of the "most significant metrics of EA efficiency,"[274] the EAOGRAM despite it limits to a single national comparison, serves as an excellent series of 10 distinct metrics that all seek to improve the EA process.

Although over time EA has been through periods of growth, fortification and periods of stagnation, the overall trajectory is positive and it is hopeful that future iterations of the EA process will see greater prescriptive tools to ensure and processes such as strategic EA, monitoring and enforcement become more substantial. Further analysis of the rest of Canada is also warranted in future studies to gather a more holistic understanding of EA in Canada. The struggle to balance the specific scientific approaches of EA and artistic discretionary approaches to the process will always present certain limitations, but the adoption of EA as an iterative process to improve how decisions are made as well as the processes that reach those decisions will continue to prove EA as one of the most effective planning and policy tools and support the progressive shift of a sustainable approach to development and economic growth.

[274] IAIA. *Environmental Impact Assessment in Canada: Frameworks, Procedures and Attributes of Effectiveness*. IAIA, 2003. 36.

Appendix I: Excerpt from IAIA report on Canada's Provinces from March, 1996.[275]

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