

Regional Strategic Environmental Assessment Roles and Stakes in Arctic Oil and Gas Development

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ABSTRACT

Canada's Beaufort Sea-Mackenzie Delta Basin possesses significant energy resource potential. Decisions about energy development, however, are largely project-based and do not always provide an opportunity for more efficient and more effective regional and strategic approaches to development impact assessment and management. As such, there are constant messages about the need for a more regional and strategic form of environmental assessment, practiced above the project level and focused on broader planning-based assessment as a means to sustainability assurance. The problem, however, is that there is no formal system of regional or strategic assessment (R-SEA) in northern Canada, and considerations as to what R-SEA is and what it should deliver are far from consolidated. The role of R-SEA must be better understood and a means found to make it a meaningful component and accepted and worthwhile part of planning, regulation and development decision-making. The purpose of this thesis is to identify stakeholder understandings and expectations about R-SEA, and its potential roles and opportunities in Arctic energy planning and assessment. Data were collected using semi-structured interviews with knowledgeable stakeholders in Arctic oil and gas initiatives, including energy regulators, industry, and energy interest groups, as well as Inuvialuit governments and community boards.

Four key themes are identified and discussed: the efficacy of the current approach to environmental assessment for offshore energy development; knowledge of R-SEA; R-SEA benefits and risks; and opportunities and challenges to advancing R-SEA in the Inuvialuit Settlement Region (ISR). Only consultation and engagement was seen by most participants as working well within the current EA system in the study area. Many challenges were raised, however, which would indicate a need for a new or revised approach to EA in the study area. There was agreement on the need for a more regional and strategic approach to EA in the ISR, but there was no consensus amongst participants as to the nature and scope of R-SEA and what it is intended to deliver. Though there continues to be much confusion regarding the terminology used, it appears that participants are identifying the same deliverables and advantages, suggesting that they are looking for similar benefits. Challenges to moving such a process forward include leadership, coordination of interests, financial resources, legislated versus voluntary approaches, and human capacity in the ISR region. Future research is needed to address the perceived risks and challenges raised by participants for R-SEA to be a worthwhile and effective process.

Keywords: Environmental assessment, Arctic energy, Resource development, Beaufort Sea

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LIST OF ABBREVIATIONS

BEMP	Beaufort Environmental Monitoring Project
BREAM	Beaufort Regional Environmental Assessment and Monitoring Program
BREA	Beaufort Regional Environmental Assessment
BSEAP	Beaufort Sea Environmental Assessment Panel
BSSrPA	Beaufort Sea Strategic Regional Plan of Action
CAPP	Canadian Association of Petroleum Products
CCME	Canadian Council of Ministers of Environment
CEAA	Canadian Environmental Assessment Agency
CEA Act	Canadian Environmental Assessment Act
CEA	Cumulative Effects Assessment
CNSOPB	Canada-Nova Scotia Offshore Petroleum Boards
COPE	Committee for the Original People's Entitlement
DFO	Department of Fisheries and Oceans
DIAND	Department of Indian and Northern Development
EA	Environmental Assessment
EARP	Environmental Assessment and Review Process
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EIRB	Environmental Impact Review Board
EISC	Environmental Impact Screening Committee
ENGO	Environmental Non-government Organization
ENRCan	Environment and Natural Resources Canada
ESRF	Environmental Studies Research Fund
FJMC	Fisheries Joint Management Committee
GNWT	Government of the Northwest Territories
HTC	Hunters and Trappers Committee
IDC	Inuvialuit Development Corporation
IFA	Inuvialuit Final Agreement
IGC	Inuvialuit Game Council
IIC	Inuvialuit Investment Corporation
ILA	Inuvialuit Land Administration
ILC	Inuvialuit Land Corporation
INAC	Indian and Northern Affairs Canada
IPC	Inuvialuit Petroleum Corporation
IRC	Inuvialuit Regional Corporation
ISR	Inuvialuit Settlement Region
JS	Joint Secretariat
LOMA	Large Ocean Management Area
MEMP	Mackenzie Environmental Monitoring Project
NEB	National Energy Board
NEP	National Energy Program
NOGAP	Northern Oil and Gas Action Plan
NWT	Northwest Territories
NWT CIMP	Northwest Territories Cumulative Impact Monitoring Program

OAC	Oceans Action Plan
PERD	Program of Energy Research and Development
PPP	Policy, plan and program
REA	Regional Environmental Assessment
R-SEA	Regional Strategic Environmental Assessment
SEA	Strategic Environmental Assessment
TEK	Traditional Ecological Knowledge
WMAC	Wildlife Management Advisory Council
WWF	World Wildlife Federation

CHAPTER 1

INTRODUCTION

1.0 Introduction

Environmental Assessment (EA) is broadly defined as a tool for identifying, predicting, evaluating, and mitigating the potential environmental impacts of a specific development project before major decisions and commitments about that project are made (Hanna, 2009). In Canada, EA is required at the federal level under the *Canadian Environmental Assessment Act*, as well as under the various laws of the provinces and territories. In the Canadian North, EA is administered also under various land claims agreements, including the *Mackenzie Valley Resource Management Act* in the Mackenzie Valley of the Northwest Territories, and the *Inuvialuit Final Agreement* in the Beaufort Sea area (Galbraith et al., 2007).

The typical purpose and focus of EA is the integration of environmental considerations in project-based planning and decision-making in support of sustainable development (Noble, 2010). However, while EA has emerged as an important environmental management tool in project planning, it is widely criticized for having too narrow a scope to achieve its sustainability objective (see Gibson and Hanna, 2009; Gibson, 2002; Noble, 2002; von Seht, 1999). In practice, EA typically functions within a narrowly defined spatial and temporal context – that of the individual development project (Dubé, 2003). This project-based approach to EA reduces its ability to effectively manage the impacts of development that typically occur over a much larger, regional scale (Harriman and Noble, 2008). As a result, EA is primarily a tool for mitigating the potential environmental effects of a pre-determined development project (Partidário, 2000), rather than a forward-looking tool to identify and plan for alternative futures (Noble and Harriman, 2009).

There are now constant messages from government, industry, science and academia on the need to advance EA towards a more regional scale, beyond the individual development project, and to the earliest stages of development decision-making processes (e.g, BSSrPA, 2007; CCME, 2009; Jenkins, 2008; Noble, 2002; Thérivel et al., 1992). This higher-order form of regional EA, referred to as Regional Strategic Environmental Assessment (R-SEA), is defined by Harriman Gunn and Noble (2009: 260) as "...a process designed to systematically assess the potential environmental effects, including cumulative effects, of alternative strategic initiatives, policies, plans, or programs for a particular region." Emerging out of Strategic Environmental Assessment (SEA) principles (see Vicente and Partidário, 2006; Partidário, 1996), R-SEA was formally adopted by the Canadian Council of Ministers of Environment (CCME, 2009) as a regionalized model of SEA; an effort to extend SEA in Canada beyond the formal federal Cabinet Directive (see CEAA, 1999) and to provide a framework to facilitate more regional-based EA and planning initiatives to address environmental issues at the strategic¹ levels of decision-making. In this regard, R-SEA allows for sustainability objectives and broad alternatives to be included in the decision-making process, and focuses attention on identifying and assessing alternative development futures for a region rather than just predicting and mitigating the impacts of individual projects (Harriman and Noble, 2008). The overall purpose of R-SEA then is to allow for more informed development decisions in support of sustainability (CCME, 2009).

Part of the challenge to advancing R-SEA, however, is that basic understandings of what SEA is and what it should deliver, including regional applications of SEA, are still far from consolidated (Noble, 2009; Vicente and Partidário, 2006; von Seht, 1999). This is particularly the case in Canada's Arctic energy resource sector. Since Canada's withdrawal in 1984 from the National Energy Program, the Canadian government has adopted a 'hands-off' approach to planning for future Arctic development (Harrison, 2006). This has left the proponents who wish to develop in this resource sector to deal with outstanding issues within the Arctic region (see Jenkins, 2008), including, for example, issues of regional economic development, negotiating impact benefit

¹ See Chapter 2 for a description of *strategic* in the context of environmental assessment.

agreements, and assessing potential cumulative environmental change. Although various forms of strategic and regional EA are advancing in the international energy sector, including Norway, the United Kingdom, and the United States (Chaker et al., 2006; World Bank, 2005), Canada has no formal system of R-SEA for Arctic oil and gas planning and development (Harriman and Noble, 2008). Canada's Arctic region is at the threshold of major energy development and, as such, there is a need and opportunity to develop and implement a system of R-SEA to allow for environmental protection as well as socio-economic and cultural impact management, benefits-sharing, sustainability², and cumulative effects assessment before project development decisions are made (see BSSrPA, 2007).

1.1 Research Purpose and Objectives

Before a worthwhile, effective and accepted process of R-SEA can be developed and utilized in Canada's Arctic regions, there is a need to first determine exactly what R-SEA is and what it can and should deliver (see Noble and Harriman, 2008; Vicente and Partidário, 2006) in the context of Arctic oil and gas development initiatives. Currently, the nature, potential roles and benefits of strategic and regional EA initiatives in Arctic energy planning and development are largely unknown (Noble, 2009). For example, what is the role of R-SEA in project impact assessment and development decision-making? What do different stakeholders, including industry, government, and Arctic communities, hope to achieve by implementing a system of R-SEA? Who should be the responsible authority, and are there mechanisms to ensure that strategic outcomes influence project actions?

Based on a case study of the oil and gas industry in Canada's Beaufort Sea, the overall purpose of this thesis is to examine the potential roles of and opportunities for R-SEA in the planning and assessment of Arctic energy initiatives. This will be accomplished through the following research objectives, to:

² See Chapter 2 for a description of *sustainability* and *sustainable development* in the context of environmental assessment.

1. examine stakeholder knowledge of, and expectations about, strategic and regional EA for Arctic energy resource planning and development decision making; and
2. identify the perceived opportunities for and barriers to a system of R-SEA for Arctic oil and gas exploration and development.

The focus of this research is on the Beaufort Sea offshore area of the Inuvialuit Settlement Region, as defined in the Beaufort Sea Strategic Regional Plan of Action (BSSrRPA, 2007)³.

1.2 Thesis Format

This thesis is presented in five chapters, including the Introduction. Chapter 2 provides a general overview of EA, SEA, and R-SEA in Canada, as well as past and present energy development initiatives in the Beaufort Sea region. Chapter 3 describes the study area, and the research methods. Results of the semi-structured interviews with study participants are presented and discussed in Chapter 4. Finally, study conclusions are presented in Chapter 5 as well as directions for further research.

³ See Chapter 3 for a description of the study area.

CHAPTER 2

THE EVOLUTION OF ENVIRONMENTAL ASSESSMENT

2.0 Introduction

Environmental assessment (EA) is now practiced in more than 100 countries around the world, and there is a considerable volume of literature on the subject. The focus of the following sections is on the Canadian EA system and, in particular, the limitations to project-based EA and the need for a more regional and strategic approach. The notion of strategic environmental assessment (SEA) is introduced, including its principles and objectives, and the current state of practice of SEA is reviewed. Next, regional strategic EA (R-SEA) is discussed, along with its origins and potential benefits. Finally, the Canadian Arctic energy context is presented with respect to looming oil and gas development in the Beaufort Region, and the opportunity to implement R-SEA for the sustainable development of Arctic energy resources.

2.1 Environmental Assessment

Environmental assessment was first introduced in the United States by the *National Environmental Policy Act* of 1970. In Canada, EA emerged in the early 1970s as a policy requirement to screen for potential pollution effects of developments (Herring, 2009), and was legislated in 1992 at the federal level under the *Canadian Environmental Assessment Act* (CEAA, 1992) – one of the purposes of which is to facilitate decisions about development that promote sustainability. In the context of this thesis, sustainability is seen as a process, and not an end point. Sustainable development includes ‘opportunities to protect and enhance the environment and the economies, culture and health of indigenous communities and of other inhabitants of the Arctic, as well as to improve the environmental, economic and social conditions of Arctic communities as a whole’ (SDWG, 2009: 1). It can also refer to development that meets the needs of the present, without compromising the ability of future generations to meet their own needs (CEAA, 2010).

The practice of EA has evolved considerably over the past 30-plus years. Gibson (2002: 152), for example, notes that EA “has moved towards being earlier in planning, more open and participative, more comprehensive, more mandatory, more closely monitored, more widely applied, more integrative, more ambitious, and more humble.” At the same time, however, EA is criticized as falling short of meeting its sustainability mandate (e.g. Noble, 2002; von Seht, 1999); there appears to be a growing dissatisfaction, if not “disillusionment. . . and scepticism that impact assessments are contributing to better decisions” (Fuggle, 2005: 1).

Numerous authors have written about the challenges to EA in terms of public involvement (Diduck and Sinclair, 2002), monitoring (Morrison-Saunders and Bailey, 1999), and various other process elements (e.g. Cashmore, 2004; Hanna, 2009; Kellar and Hanna, 2009; Sadler, 1996). However, the main challenge to EA is that the process itself is largely reactive and constrained to the assessment of individual development projects and to project-by-project decision-making (Partidário, 2000). The subject of EA is typically an individual infrastructure project (e.g., an oil and gas pipeline), and the focus is often on mitigating, to the point of acceptability, the project’s potential effects on the receiving local environment (Noble, 2010). EA at the project level is implemented too late in the decision making process to influence decisions about development options, and to explore alternative development futures (Gibson, 2002; Partidário, 2000).

The most important decisions concerning development often occur before projects are identified, during the formulation of policies, plans and programs (PPPs) - decisions not typically subject to EA (Bina, 2007). For example, decisions made regarding a regional land-use management plan will likely shape the future development of that region, the types of projects that will be allowed to develop, and the potential cumulative environmental effects of development. As such, Noble (2010: 251) argues that “EA in the absence of more strategic and regional processes is inherently constrained in its ability to facilitate decisions about development that are consistent with the broader principles of sustainability.” To advance the sustainability initiative in EA requires the application of

EA beyond the scope and scale of individual projects to a more regional scale and to the strategic levels of PPP decision-making (Sadler, 1996).

2.2 Strategic Environmental Assessment

Strategic environmental assessment has been ongoing in Canada since the early 1980s, and as a formal process, separate from project-based EA requirements, since 1990. In the context of this thesis, strategic refers to a strategy or scheme for development and decision-making, which means SEA, then, is a process or means that leads to a strategy for action (Noble, 2000b). Strategic levels of decision-making, according to Noble (2000b, 206), include “the set of principles and objectives that shape the visions and development intentions incorporated in a set of alternatives, policy, plan or programme”. Strategic levels of decision-making move past the level of project EA, to an earlier and higher level of environmental planning.

The origins of SEA can be traced to programmatic assessments under the US *National Environmental Policy Act* of 1970. It was not until the World Commission on Environment and Development report, *Our Common Future* (1987), however, and the United Nations Earth Summit in Rio de Janeiro (1992), that SEA started to gain international momentum as a formal approach to EA, separate from traditional project-based EA (Noble, 2002). Canada is recognized internationally as a country that has made significant contributions to the development of SEA (see Table 1) (Noble, 2002).

Introduced as a policy requirement under the federal Environmental Assessment Review Process of the 1980s, in 1990 Canada developed the first, formal requirements for SEA - *The Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* (see Dalal-Clayton and Sadler, 2005). Under this Directive, every PPP proposal submitted to a minister or cabinet for approval, which may result in either positive or negative environmental effects, is required to have an SEA (CEAA, 1999). The Directive was updated in 2004 to provide procedural support to federal departments and agencies so as to ensure compliance with the Directive. In an attempt to bring the SEA approach into a regionalized context, where SEA can be applied outside the scope

of the federal Cabinet Directive, the Canadian Council of Ministers of Environment in 2008 commissioned a research initiative to develop a regional SEA framework and supporting principles and methodology.

In principle, SEA is intended to have a tiered-forward effect meaning that the benefits of SEA application to higher-level policies trickle down, affecting plans and programs, and eventually influencing decisions about individual projects (Fischer, 1999). SEA is thus intended to be utilized early in the decision-making process to ensure full consideration of alternative options when there is still enough flexibility to influence decisions before irreversible ones are made (Noble and Harriman-Gunn, 2009). In this way, SEA is proactive, and under it questions like ‘what is the preferred option’ or ‘what is the desired attainable end’ are asked, rather than it being used to simply predict the most likely outcomes of a predetermined type of project action (Noble, 2002).

In practice, however, SEA appears to have fallen short of its promise. No formal SEA systems exist in Canada outside of the federal Cabinet Directive (Dalal-Clayton and Sadler, 2005) and, at the provincial level, SEA is not practiced in any structured way. When practiced, SEA is often interpreted as either an extension of the regulatory EA process or ad hoc regional environmental studies (see Noble, 2009). Recent reviews of the state of SEA practice in Canada suggest that SEA is not meeting its potential as a higher-order EA tool in support of sustainability (see Gibson, 2002). For example, Noble (2009: 146) reviewed 10 case applications of SEA across Canada, both formal and informal, and found “considerable variability in SEA experience and value added,” noting that the systematic separation of SEA from downstream decision inputs, or project based EA, and assessment activities is particularly concerning.

There are several reasons for the current state of SEA. These have been widely addressed in the academic literature, and are not unique to the Canadian context (see, for example, Thérivel, 2009; Thérivel and Walsh, 2006; Dalal-Clayton and Sadler, 2005; Fischer, 2003). In addition to the lack of tiering in SEA, and its influence over downstream project decisions, as discussed above, limitations to SEA practice include the lack of

political will, methodological challenges, and the lack of agreement on what it is that SEA is supposed to deliver.

Table 1: Evolution of Federal SEA/R-SEA in Canada.

1984	<ul style="list-style-type: none"> • The Canadian federal <i>Environmental Assessment and Review Process Guidelines Order</i> wrote EA into PPPs, but it was not manifest in practice • ‘Proposal’ is defined as including any initiative, undertaking or activity for which the federal government has a decision-making process
1990	<ul style="list-style-type: none"> • <i>Canadian Environmental Assessment Act</i> bill introduced (PPP’s not included within its scope) • Reform package for EA that included a new EA legislation and an EA process for new policy and program proposals that required SEA: <i>Cabinet Directive on the Environmental Assessment of Policy, Plan and Program proposals</i>
1991	<ul style="list-style-type: none"> • <i>Environmental Assessment I Policy and Program Planning: A Sourcebook</i> was released, which was the first Federal government initiative in the development of a system of SEA
1992	<ul style="list-style-type: none"> • <i>Canadian Environmental Assessment Act</i> receives legislative approval
1993	<ul style="list-style-type: none"> • Cabinet Directive regarding the EA process for policy and program proposals were released • An internal review of the Cabinet Directive revealed that SEA was poorly understood, and application was inconsistent at best
1995	<ul style="list-style-type: none"> • Federal government releases <i>Strategic Environmental Assessment: A Guide for Policy and Program Officers</i>
1998	<ul style="list-style-type: none"> • Parks Canada acknowledges and pledges compliance with the <i>Cabinet Directive</i> in their Management Directive
1999	<ul style="list-style-type: none"> • Canadian Environmental Assessment Agency released its revised Cabinet Directive on SEA and guide to the SEA process.
2000	<ul style="list-style-type: none"> • Canadian Environmental Assessment Agency stated developing a framework for regional environmental effects assessment as a priority
2001	<ul style="list-style-type: none"> • Canada’s first SEA is published by the Canada-Nova Scotia Offshore Petroleum Board for the offshore oil industry
2004	<ul style="list-style-type: none"> • Guideline on the Cabinet Directive on SEA is updated
2008	<ul style="list-style-type: none"> • Canadian Council of Ministers of Environment (CCME) commences development of a regional strategic environmental framework for Canada
2009	<ul style="list-style-type: none"> • CCME released its guidance on R-SEA

Source: Noble, 2002; Noble and Harriman, 2008.

2.2.1 Political will

The basic lack of political will is a significant challenge to the SEA process. Governments have resisted SEA, for various reasons, but mainly because they are unhappy with its basic idea (Gibson, 2002). In other words, accepting and applying an advanced EA process (to regions, or to PPPs) will force decision-makers to accept a much broader, and mostly unfamiliar set of EA obligations and objectives, to be placed under greater public scrutiny, and risk losing some of their independence and authority (Dalal-Clayton and Sadler, 2005; Gibson, 2002; Partidário, 2000). Gibson (2002: 156) sums it up as follows: “effective assessment requirements are meant to challenge conventional assumptions and conventional practices, and they are resisted for that reason.” A strong political commitment is necessary to ensure that SEA is activated early in development decision-making (Dalal-Clayton and Sadler, 2005); however, there is limited appreciation from both governments and proponents of SEA’s potential to move assessment ‘upstream’, or at the level of PPPs, and doubts about the robustness of results (Dalal-Clayton and Sadler, 2005). Political resistance, however, is not unique to R-SEA, but rather, there is resistance in general to policy shifts or to policies and actions that may expose government decision processes.

2.2.2 Methodological approach

Added to the largely institutional and political challenges to SEA is the lack of consensus on, and demonstrated application of, SEA methodology (Wallington et al., 2007; Partidário, 2007; Dalal-Clayton and Sadler, 2005; Noble, 2002). On one hand, various authors have argued that SEA requires a highly structured assessment methodology that can deal with the complex and non-linear processes that are typical of regional and strategic level decision-making – including uncertain futures, alternative scenarios, and cumulative effects over multiple spatial and temporal scales (Herrera, 2007). On the other hand, Brown and Thérivel (2000) argue that a broad range of SEA methodologies be utilized in the PPP-making context, and that SEA should be thought of in terms of “an

array of tools from which the appropriate one(s) can be selected to meet the needs of the particular circumstances”. Partidário and Clark (2000) agree, stating that SEA must be absolutely tailor-made to the kind of decision at stake, and the nature of the decision-making processes in place. In short, there is no consensus as to how much structure versus how much flexibility is acceptable in SEA methodology and application (see Retief, 2007).

2.2.3 SEA roles and expectations

Arguably, the most fundamental challenge to SEA is a basic lack of consensus on what SEA is and what it should deliver. Practitioners, regulators, and academics remain divided on the fundamental principles of SEA, including the roles it can and should play in decision making, and what SEA can actually deliver in support of sustainability (Noble, 2009; Bina, 2007; Herrera, 2007; Wallington et al., 2007; Vicenté and Partidário, 2006; Fischer, 2003; Noble, 2003; von Seht, 1999). Most agree that SEA involves the early consideration of environmental issues in PPP decision-making (Noble, 2000), but SEA is variably discussed in terms of a ‘tiered, nested, or sequential’ framework (Barrow, 1997), an ‘issues driven’ and ‘participative’ approach (CSIR, 1996), and an ‘extension of project-based EIA’ upstream to higher levels of decision making (Court et al., 1994).

The variation in SEA has also led to some confusion with non-SEA experts about what SEA is (Verheem and Tonk, 2000). As Vicenté and Partidário (2006) note, “some interpretations of SEA are more concerned with the capacity of SEA to influence decisional contexts and the formulation of strategic initiatives, whether policies, plans or programmes (e.g., Partidário and Fischer, 2004; Bina, 2003; Nilsson and Dalkmann, 2001)...others tend to streamline the SEA process as a standard sequence of activities, centered in the preparation of an SEA report that culminates in the key purpose of informing, and validating, a final decision (e.g., Thérivel, 2004; European Directive, 2001/42/EC).” Tonk and Verheem (1998) go so far as to characterize SEA as one concept, multiple forms, reflecting on the lack of consensus on the subject.

There is also an array of expectations placed on the SEA process, and, as such, it is unlikely that SEA will meet each one simultaneously and in any given application (Bina, 2007). For example, SEA cannot be expected to replace project-based EA – SEA is focused on PPPs and regions, not projects, and, ideally, EA should be the next step after the SEA is completed (Noble, 2010). SEA was never designed to identify effects that are specific enough to replace an EA. Also, SEA cannot deliver on its promise of cumulative effects assessment if it is implemented in a system that has neither the regional models nor institutional framework necessary to implement and sustain it (Harriman and Noble, 2009). With this diversity, many who implement and use SEA processes remain to be convinced of its value (Dalal-Clayton and Sadler, 2005).

If SEA is to continue to advance, the nature and added value of SEA needs to be apparent to both decision-makers and proponents (Partidário, 2000). Brown and Thérivel (2000) argue that all players must agree upon the concept of SEA. Part of the challenge, however, is that SEA research has focused largely on methodology (e.g. Dalal-Clayton and Sadler, 2005; Thérivel, 2004; Noble and Storey, 2001), while the diversity of stakeholder expectations and the roles of SEA in the environmental assessment continuum are still not clearly defined (Bina, 2007). SEA needs to be better understood if it is to be welcomed into decision-making for resource planning and development, and if the anticipated outputs and results expected can actually be delivered (Dalal-Clayton and Sadler, 2005).

2.3 Regional Strategic Environmental Assessment

Regional strategic environmental assessment (R-SEA) is based on combining the principles of regional assessment, CEA, and SEA, and was formally adopted by the Canadian Council of Ministers of Environment (CCME, 2009) as a regionalized model of SEA. R-SEA emerged out of basic SEA principles (see Vicenté and Partidário, 2006; Partidário, 1996), and was developed in Canada as an effort to extend SEA beyond the formal federal Cabinet Directive and to provide a framework to facilitate a more regional-based EA and planning approach so as to address environmental issues at the

strategic levels of decision-making. Harriman-Gunn and Noble (2009) describe R-SEA as “a process designed to systematically assess the potential environmental effects, including cumulative effects, of alternative strategic initiatives, policies, plans, or programs for a particular region.” As PPPs become increasingly sensitive to sustainability needs (Noble and Harriman, 2008), and as the federal and territorial governments more willing to consider innovative approaches to EA, it seems timely to consider R-SEA as an effective approach to incorporating sustainability goals with future development scenarios for regions.

The overall intent of R-SEA is therefore to facilitate a more proactive and integrated approach to SEA, operating at the regional scale specifically and facilitating cumulative effects assessment (Noble and Harriman, 2008). Its overall purpose is to allow for more informed development decisions in support of sustainability initiatives (CCME, 2009). R-SEA allows for sustainability objectives and broad alternatives to be included in the decision-making process for regional resource planning and development, and focuses attention on identifying and assessing alternative development futures for a region rather than just predicting and mitigating the impacts of individual projects (see Table 2) (Harriman and Noble, 2008). As R-SEA is intended to guide the development of PPPs and strategic initiatives above the project tier, eventually influencing specific project design and development decisions, R-SEA is reserved for complex and fairly significant regional planning and strategic decision making contexts (Noble and Harriman, 2008). The core principles of R-SEA are its strategic nature; cumulative effects driven, and regionally focused approach (Harriman-Gunn and Noble, 2009). It is an expectation that the preferred regional strategies and PPPs are adaptive, and will be altered as needed as monitoring progresses, as new knowledge is gained, or as the vision of the region changes (Harriman-Gunn and Noble, 2009).

Table 2: Potential benefits of R-SEA.

-
- Facilitates the development of improved PPPs and strategic initiatives
 - Provides a more regional focus for development and decision-making
 - Ensures that CEA is captured at the appropriate tier and scale
 - Contributes to regional sustainability goals
 - Enables and encourages data sharing from regional and project impact monitoring programs
 - Facilitates state-of-the-region environmental monitoring and reporting
 - Saves time and resources by providing a means to streamline subsequent project EA
 - Establishes goals, thresholds, or maximum allowable limits against which to conduct project-based performance and impact assessment
-

Source: Noble and Harriman, 2008; Harriman Gunn and Noble, 2009.

R-SEA is different from other types of regional environmental studies and impact assessments. Aside from a basic understanding of these differences and the role and intent of R-SEA (see Harriman-Gunn and Noble, 2009; Noble, 2009), other challenges to advancing its adoption and practice include the lack of triggers or responsible authorities to ensure that R-SEA is done, the lack of a ‘home base’ or lead agency, and the lack of mechanisms to ensure that the results of R-SEA actually influence decision making, specifically at the project-level EA (Harriman-Gunn and Noble, 2009). Though R-SEA-like applications have been adopted for energy planning and development in terrestrial landscapes in Canada’s south, such as in the Great Sand Hills of Saskatchewan (see Noble, 2008), similar initiatives have not advanced for offshore energy planning and development in Canada’s Arctic regions.

2.4 Towards a System of R-SEA in Canada’s North

Various forms of R-SEA are advancing internationally in the energy resource sector. In the Gulf of Mexico, for example, SEA is practiced regionally under the auspices of programmatic EA within the *National Environmental Policy Act*. Here, a programmatic EA is conducted by the United States’ Bureau of Ocean Energy Management, Regulation and Enforcement (formerly the Minerals Management Program Office) to assess the potential environmental impacts of, and alternatives to, major offshore oil and gas development programs. In the United Kingdom, approximately eight SEAs have been completed for offshore regions for oil and gas licensing. SEA for offshore energy

development licensing in the United Kingdom is required under the European *Strategic Environmental Assessment Directive* (European Directive, 2001/42/EC). The purpose of the EC Directive with regard to offshore oil and gas is to assess the potential impact of the offshore oil and gas licensing rounds, which are the periods where proponents are asked to bid on lease blocks in the ISR, and to promote environmentally sound development of offshore hydrocarbon resources.

In the Canadian context, a system of SEA does exist for the offshore energy sector in Atlantic Canada, under the direction of the Canada-Newfoundland and Canada-Nova Scotia Offshore Petroleum Boards (CNSOPB, 2010). In this region, SEA is conducted by the petroleum boards and crown corporations of the government of Canada, to identify potential environmental issues, such as marine sensitive areas and the impacts of exploration, prior to opening offshore areas for licensing. In this region, SEA is conducted in compliance with the federal Cabinet Directive and all subsequent projects in the SEA areas require a project-specific EA prior to development approval. In the Canadian northern territories and offshore Arctic regions, however, there does not exist a formal system of SEA for energy resource planning and development. Energy resource development is planned and assessed largely under project-based impact assessment, including, for example, the *Mackenzie Valley Resource Management Act* in the Northwest Territories, and under the *Inuvialuit Final Agreement* in the Beaufort Sea area of the Inuvialuit Settlement Region.

2.4.1 Planning for energy development in the Beaufort Sea: Past and Present

The Beaufort Basin, consisting of the Beaufort Sea and the Mackenzie Delta, in Canada's Arctic is rich in hydrocarbon resources (Harrison, 2006), and is at the threshold of major energy development. This is not a new situation in the Beaufort, however, as the region has been on the verge of development, it seems, since the early 1900s (Table 3). Energy development began in the Canadian Arctic with the discovery of oil at Norman Wells in 1919 by Imperial Oil Ltd. (INAC, 2009). Exploration increased in the southern NWT and at Norman Wells during the 1940s and 1950s, followed by exploration in the

Canadian Arctic when the federal government opened the area to oil and gas exploration (NEB, 2009) in the 1960s (INAC, 2009). This, along with rapidly rising energy prices, led to a surge in interest by oil and gas companies.

The majority of exploration drilling activity to date in the region occurred in the 1970s and 1980s (NEB, 2009). To secure a voice in deciding the future of the Beaufort Sea region, the Inuvialuit recognized the need to enter into an agreement with the Government of Canada, thus leading to the creation of the Committee for the Original People's Entitlement (COPE) in 1974, which fought to settle the outstanding land claims in the Inuvialuit Settlement Region (ISR). This ten-year initiative led to the signing of the Inuvialuit Final Agreement (IFA) in 1984 (Joint Secretariat, 2001), which set aside 906,430 square kilometers of land known as the ISR, as well as granting the Inuvialuit surface and subsurface titles to 35,000 square kilometers of land in the ISR (CAPP, 2009; IRC, 2011). This settlement of native land claims had a major influence on hydrocarbon development in the Beaufort in the 1970s (CAPP, 2009), leading to the establishment of a range of regulatory and advisory agencies consisting of both government of Canada and Inuvialuit representation (CAPP, 2009).

Table 3: Summary of Regional Environmental Reports in the Beaufort Region

Date	Program/Report
1970s-1990s	Environmental Studies Series published by INAC <ul style="list-style-type: none"> Over 70 research reports, much of which concerned research related to oil and gas
1970s-present	Program of Energy Research and Development (PERD) <ul style="list-style-type: none"> Designed to address environmental and technical issues related to hydrocarbon development across Canada
1970s-present	Environmental Studies Research Funds (ESRF) <ul style="list-style-type: none"> Assists in the decision-making process related to oil and gas exploration and development on Canada's frontier lands
1970s-present	NWT Cumulative Impact Monitoring Program (NWT CIMP) <ul style="list-style-type: none"> A number of monitoring and capacity-building projects have been completed during development of the ISR
1974	The Berger Inquiry <ul style="list-style-type: none"> Assessed the proposed pipeline for the Mackenzie Valley
1975	Environmental Impacts of Arctic Oil and Gas Development process <ul style="list-style-type: none"> Initiated by the Inuit Tapirisat of Canada
1977	Cabinet Directive for the Beaufort Sea Project Technical Resource Series <ul style="list-style-type: none"> Examined the consequences of a possible oil spill from drill ships
1982	Beaufort Sea/Mackenzie Delta Environmental Impact Statement (EIS) for the Beaufort Sea Hydrocarbon Production and Transportation Proposal <ul style="list-style-type: none"> Prepared by a consortium of oil and gas proponents led by Dome Petroleum
1983-2004	Arctic Environmental Sensitivity Atlas <ul style="list-style-type: none"> Revised in 2004
1983-1987	Beaufort Environmental Monitoring Project (BEMP) <ul style="list-style-type: none"> Identified and assessed potential environmental effects of offshore and near-shore oil and gas development Identified important information gaps and appropriate studies to fulfill these gaps
1984	Beaufort Sea Hydrocarbon Production and Transportation Proposal: Report of the Environmental Assessment Panel <ul style="list-style-type: none"> Detailed recommendations on the Beaufort Sea EIS
1984	Northern Oil and Gas Action Plan (NOGAP) Beaufort Environmental Monitoring Program (BEMP) <ul style="list-style-type: none"> A 7 year federal government research and planning program Intended to advance the state of preparedness for hydrocarbon development in the Beaufort Sea Identified and assessed potential environmental effects of offshore and land-based oil and gas development Identified important information gaps and appropriate studies to fulfill these gaps
1985-1987	Mackenzie Environmental Monitoring Project (MEMP) <ul style="list-style-type: none"> Identified and assessed potential environmental effects of onshore and near-shore oil and gas development Identified important information gaps and appropriate studies to fulfill these gaps Focus was mainly in the Mackenzie Valley along the proposed pipeline corridor
1991	Beaufort Sea Steering Committee <ul style="list-style-type: none"> A report to the DIAND regarding issues arising from the Environmental Impact Review Board Review of the Isserk and Kulluk Drilling Program Applications
1991-1994	Beaufort Region Environmental Assessment and Monitoring Program (BREAM) <ul style="list-style-type: none"> Combined and coordinated the efforts of BEMP and MEMP within a common framework Involved governments, industry and Aboriginal people and co-management organizations
1991	A community-based regional land use plan developed for the Beaufort Sea/Mackenzie Delta Region <ul style="list-style-type: none"> Formed the basis for the current community conservation plans for each of the six communities within the ISR
1992	Considerations in the Design of Effects Monitoring Strategies, Beaufort Case Study
1996-2005	Oceans Act (1996) Canada's Oceans Strategy (2002)

	Oceans Action Plan (2005)
	<ul style="list-style-type: none"> • All were done to improve oceans management and preserve the health of marine ecosystems • The ISR forms one of the five Large Ocean Management Areas under the Oceans Action Plan
2002-2009	Federal Northern Oil and Gas Research projects for the Mackenzie Gas Project and induced oil and gas activities <ul style="list-style-type: none"> • INAC, Environment Canada, DFO, NRCan • Federal government is funding 69 million dollars for northern oil and gas science research projects
2003-present	ArcticNet <ul style="list-style-type: none"> • Funded by the Canadian Networks of Centers of Excellence • Intensive, long-term, multidisciplinary climate variability research program • Designed to accelerate scientific investigation into the many natural, social and health science issues and consequences in the North
2004-2007	Beaufort Sea Strategic Regional Plan of Action (BSStRPA) <ul style="list-style-type: none"> • Set out to address regional data gaps related to offshore oil and gas activities • To provide detailed scientific and socio-economic information to all stakeholders to support regulatory decision-making
2008-present	Beaufort Regional Environmental Assessment (BREA) <ul style="list-style-type: none"> • Intended to provide information on the entire Beaufort region to support decision-making and simplify project-level EA

Source: CAPP, 2009; BSStRPA, 2008.

Alongside these developments, in 1974 the Mackenzie Valley Pipeline Inquiry (commonly known as the Berger Inquiry, see Table 3) began preliminary hearings across the NWT and Yukon in response to the two pipeline proposals for the transport of natural gas from the Beaufort Sea to southern markets in Canada and the United States (CAPP, 2009). Formal hearings began in 1975, and were concluded in 1976. In 1977, the Berger Inquiry proceeded with recommendations for a ten year moratorium on the development of a Mackenzie Valley pipeline until three conditions were met: (1) land claims were settled; (2) land use planning was in place; and (3) social and environmental concerns were addressed (Taylor et al., 2010).

Amongst other major initiatives in the region, in 1980 the Minister of Indian Affairs and Northern Development (DIAND) asked the Minister of the Environment to hold a formal public review, under the Environmental Assessment and Review Process (EARP), for oil and gas production and transportation in the Beaufort Sea (BSEAP, 1984). In 1982, on behalf of over 40 companies holding exploration permits in the Beaufort Sea/Mackenzie Delta region, Dome Petroleum Ltd., Esso Resources Canada Ltd., and Gulf Canada Resources Ltd. prepared and submitted an environmental impact statement (EIS) on a project that aimed to produce and transport hydrocarbons from the Beaufort

Sea/Mackenzie Delta region (BSEAP, 1984). Thus, the Beaufort Sea Environmental Assessment Panel (BSEAP) set about reviewing the environmental impact statement (EIS) and associated documents from the proponents (BSEAP, 1984). In 1984, the review concluded that the project was acceptable if subjected to terms and conditions, and carried out in small phases, with intensive research and careful monitoring (BSEAP, 1984).

The National Energy Program (NEP) was created in 1980 with a goal to achieve self-sufficiency as well as to increase Canadian ownership in the oil and gas industry (Flynn, 2010). To encourage exploration, the Canadian government instituted generous packages for oil and gas companies, pouring in millions of dollars, sometimes even reimbursing companies 100% of their exploration expenses (Flynn, 2010). One of the most significant discoveries to date in the Beaufort region, the Amauligak oil field, was discovered during the 1980s (CAPP, 2009). This discovery, along with others, led to the development of the Northern Oil and Gas Action Program (NOGAP), which was initiated in 1984, and was a cooperative funding program developed by the federal government and industry to fund important research on oil and gas technology and the environment (CAP, 2009).

In 1984, Canada withdrew from its former National Energy Program, and from then on has adopted a ‘hands-off’ approach to future Arctic development (Harrison, 2006). This has left any proponents who wish to develop in the ISR to deal with outstanding issues within the Arctic region. After the government of Canada dismantled the NEP, and cut funding to the NOGAP program (between the years of 1988-1990), there was a decline in Arctic exploration in the mid-1980s, and complete abandonment by the early 1990s (Flynn, 2010; CAPP, 2009). It was also diminished by falling world oil prices (CAPP, 2009). In 1990, the idea of a large integrated impact assessment was proposed by Environment Canada with the objective of assessing climate change scenarios on the Mackenzie Basin region, its lands, waters, and the communities that depended on them (Cohen, 1997). The assessment, known as the Mackenzie Basin Impact Study, was a six-year research effort with results of the study published in 1997 (Cohen, 1997).

In 1993, NOGAPs funding was cut, exemplifying industries' low interest in energy development in the ISR (CAPP, 2009). However, rising oil prices in the late 1990s created renewed interest in oil and gas exploration in the Canadian Arctic (Flynn, 2010). With this, the Canadian government made announcements regarding the new lands available for exploration in 2000 (Flynn, 2010). The majority of the renewed interest in oil and gas initiatives in Canada's Arctic stems from the Mackenzie Delta Gas Project, which aims to run a pipeline from the Beaufort Basin south towards the Northwest corner of Alberta (DFO/INAC, 2008). An application for a pipeline that would transport oil and gas discovered at Taglu, Parsons Lake, and Niglintgak, known as the Mackenzie Gas Project, was made in 2004 (CAPP, 2009). As of 2011, the review process is ongoing and no decision has been made (CAPP, 2009). However, almost no oil and gas has been commercially produced from the Beaufort Region, despite the proved resource potential (CAPP, 2009).

In 2004, the Inuvialuit Game Council (IGC) wrote to the Minister of the Environment and requested that the Canadian Environmental Assessment Agency undertake a strategic regional environmental assessment of the future of the Beaufort Sea offshore oil and gas initiatives (BSSrPA, 2007). This launched the process to develop the 'Beaufort Sea Strategic Regional Plan of Action' (BSSrPA). This plan of action set out to address regional data gaps related to offshore oil and gas activities, and provide detailed scientific and socio-economic information to all stakeholders to support regulatory decision-making (BREA, 2010). This was a collaborative effort with the Inuvialuit, co-management bodies, industry, and the governments of Canada and the NWT (BSSrPA, 2008). BSSrPA's recommendations included the need to improve regulatory efficiency and effectiveness, the need for optimizing benefits and mitigating environmental, social and cultural impacts, and the need for planning for the future (CAPP, 2009).

Recently, there has been some movement on a more regional approach to EA in the Beaufort Sea in the form of the draft Beaufort Regional Environmental Assessment framework (BREA, 2010). Based on comprehensive discussions stemming from the

BSSrPA, a consensus has emerged that a more regional EA for the Beaufort Basin should be conducted (BREA, 2010). According to BREA (2010), the proposed Beaufort Regional Environmental Assessment “is the most efficient and practical approach to addressing regional priorities associated with oil and gas activities in the Beaufort Sea.” The two stated purposes for the BREA are to: 1) address regional data gaps related to offshore oil and gas activities; and 2) support regulatory decision-making by providing detailed scientific and socio-economic information to all stakeholders. The key goal for BREA is to provide information on the entire Beaufort region to support decision-making and simplify project-level EA (BREA, 2010). Included within the BREA report is the 2008 Environmental Science Research Fund (ESRF) report, “Biophysical Research Requirements for Beaufort Sea Hydrocarbon Development”, another comprehensive report that looked at the Beaufort Sea petroleum development (CAPP, 2009), and the Department of Fisheries and Oceans (DFO) report, “Beaufort Sea Large Ocean Management Area; Ecosystem Overview and Assessment”, also identifying data gaps in the Beaufort Sea (CAPP, 2009).

The need for an advanced form of EA in the Beaufort region is now recognized by Aboriginal groups (Gwich'in, Inuvialuit), Arctic communities, industry, governments and academics alike (DFO/INAC, 2008; Jenkins, 2008). The most recent regional and strategic effort in the ISR, BREA, shadows the idea of an R-SEA; however, the proposed BREA framework does not appear to mirror the objectives and intent of R-SEA. BREA appears focused on gathering information for oil and gas development in the Beaufort region, rather than on identifying and assessing alternative options for oil and gas planning and development. The approach is similar to that of Atlantic Canada, under the Canada-Newfoundland and Canada-Nova Scotia Offshore Petroleum Boards, where the focus is on baseline data provision, which has been heavily criticized for its lack of strategic approach and limited influence over development (see Noble, 2003). Further, the draft plan also does not fully specify what it intends to deliver to all stakeholders and, as such, expectations about the role BREA will play are largely unknown. There are similar unknown expectations, challenges and opportunities for R-SEA, and it is

important to outline these from the perspectives of the stakeholders involved if an effective and worthwhile EA tool and management plan are to proceed.

Not only may BREA not be meeting the expectations of R-SEA, but the recent oil spill crisis in the Gulf of Mexico has prompted the Inuvialuit Regional Corporation to release a letter to the Minister of DIAND and the chairman of NEB requesting a pause on all offshore hydrocarbon drilling activity in the Beaufort Sea (IRC, 2010). The Inuvialuit Regional Corporation (IRC) stated that they will not support any further oil and gas development in the ISR until industry and the Government of Canada demonstrate the ability to: (1) prevent an uncontrolled blow-out during all offshore drilling operations; (2) stop an uncontrolled blow-out in a timely and effective manner; and (3) contain and clean-up all hydrocarbons from an uncontrolled blow-out in a timely and effective manner (IRC, 2010). The IRC stressed the need for further research on the impacts of hydrocarbon exploration in the ISR offshore region (IRC, 2010). It seems timely then, to consider implementing a management tool like R-SEA in the Beaufort Basin region to allow for environmental protection as well as socio-economic and cultural impact mitigation, benefits-sharing, sustainability, and cumulative effects assessment (DFO/INAC, 2008; World Bank, 2005).

2.5 Synthesis

The traditional project-based approach to EA does not allow for sustainability objectives to be pursued effectively, due in large part to the limited scope of project-specific assessments and the reactive nature of project-level decisions. In response to the limitations of EA conducted solely at the project scale, there has emerged considerable interest in more strategic-led approaches to EAs at the regional scale – specifically R-SEA. Though a new and promising environmental management tool, understandings of what exactly R-SEA is and what it can and should deliver are still far from consolidated. Regional and strategic-like systems for EA do exist in offshore energy regions in Atlantic Canada and internationally, but no similar such system exists in Canada's Arctic. Arguably, there is a particular need to determine the opportunities for and the role of R-

SEA in Canada's Arctic, where the environment is more sensitive to change and where major oil and gas development is looming.

CHAPTER 3

RESEARCH METHODS

3.0 Introduction

This thesis examines stakeholder knowledge of and expectations about R-SEA in the planning and assessment of oil and gas initiatives in the Beaufort Sea. To do this, a qualitative research approach was taken based primarily on semi-structured interviews with industry stakeholders. In this chapter the Beaufort Sea study area is first described, followed by the methods used for data collection and analysis.

3.1 Study Area

The study area consists of the Beaufort Sea region of Canada's Northwest Territories within the ISR boundary (see Figure 1). Oil and gas activity in this region has focused on both offshore drilling in the Beaufort Sea and onshore drilling in the Mackenzie Delta region. The focus of this research is on offshore planning and development in the Beaufort Sea, specifically that area of the Beaufort Sea defined by the Beaufort Sea Strategic Regional Plan of Action offshore planning area (see BSStRPA, 2007).

The Northwest Territories (NWT) has a land mass area of 1,171,918km² (GNWT, 2000). It is a cold regions environment and glaciations have played a large role in shaping the landscape (GNWT, 2000). Geological events and geomorphic processes have created various land formations such as lowlands, hilly terrain, mountains, rock-scattered bedrock, patterned ground, slumping, and alpine glaciers (Bone, 2003). Permafrost developed in the study region approximately 16,000 to 25,000 years ago with the low temperatures associated with the late Wisconsin ice advance. The ice advance also covered the land with a continental ice sheet that depressed the earth's crust and, as it advanced, eroding it to create various land formations. The region is also showcased by unique natural features such as pattern ground, pingos and pack ice (Bone, 2003).

140 130 120 110

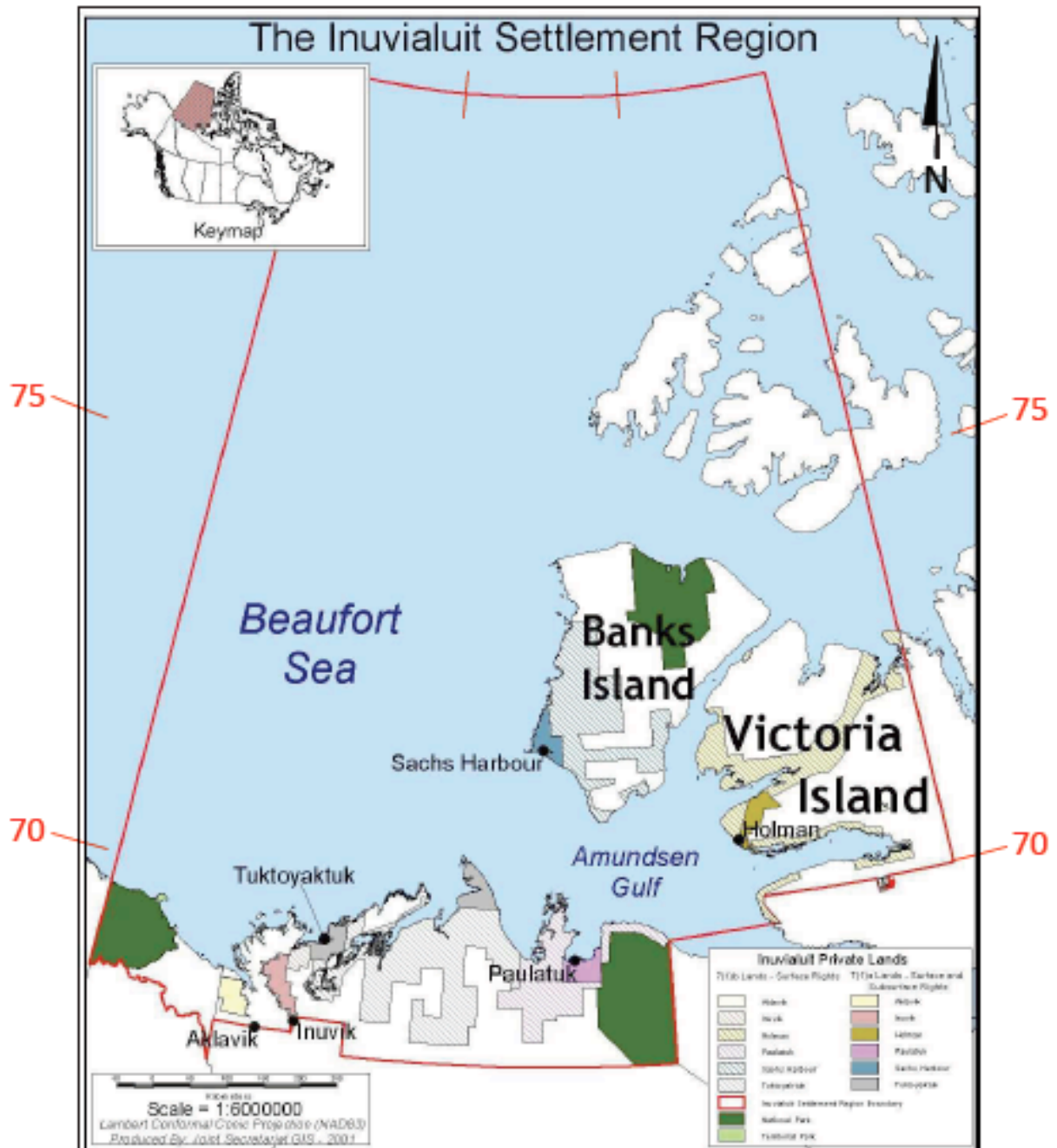


Figure 1: The Inuvialuit Settlement Region in the Beaufort Sea in Canada.
Source: Joint Secretariat (2011).

The ISR is situated within the Arctic biome, characterized by a cold and dry climate (Bone, 2003) and continuous permafrost (GNWT, 2000). The area is rich in biological diversity, including plankton, benthic fauna, macrophytes, marine and anadromous fish (Arctic char, salmon, Arctic cod, etc), birds (geese, loons, etc), terrestrial mammals (caribou, moose, grizzly bears, mountain goat, arctic fox, gray wolf, wolverine, lynx, black bear, cougar, arctic hare, beaver), and marine mammals (beluga whale, bowhead whale, ringed seal, bearded seal, polar bear, walrus, etc) (GNWT, 2000; Kavik Axys Inc. et al., 2008). The environment in the ISR, both on and offshore, is often described as ‘sensitive’ (Anderson and DiFrancesco, 2007), requiring a significantly longer time to rebound from human-induced disturbances in comparison to the warmer regions of the south. This fragility means that the risk of anthropogenic damage is just that much higher (Bone, 2003). About 99,000 square kilometers of protected areas and conservation zones comprise about 7.3% of the NWT land base (GNWT, 2009).

There are 11,422 people residing within the ISR, and of these 73% are Inuvialuit, First Nations, or Métis (Stats Can, 2011). Inuvialuit means ‘the real people’ in Inuvialuktun, and many of the 5,000 Inuvialuit people today reside in the communities of Aklavik, Inuvik, Paulatuk, Sachs Harbour, Tuktoyaktuk and Ulukhaktok (Holman) (IRC, 2011). A large part of the Inuvialuit people’s diet is derived from the harvesting of local fish and wildlife, with geese and muskox hunting in the spring and fall, whaling and fishing in the summer, and caribou hunting in the fall and winter (IRC, 2011). Fishing and hunting of local natural resources have provided sustenance, as well as a part of the Inuvialuit culture of the ISR for centuries, and continue today (Knopp, 2010). At least half of the NWT residents still hunt and fish in the ISR region (GNWT, 2009). Approximately 40-60% of the ISR residents rely on country food for at least 75% of their meat and fish (GNWT, 2009).

The NWT’s economy is expected to continue to be dependant largely on non-renewable resource development, which currently includes the production of oil and gas, as well as gold, silver, tungsten, uranium, lead/zinc and diamonds (GNWT, 2009). Vast quantities of oil and natural gas are present in the sedimentary rocks of the Mackenzie Delta, as

well as in the shallow, and more recently deeper, continental shelf rock of the Beaufort Sea. The oil and gas-rich Beaufort Sea region is the continuation of the Western Canada Sedimentary Basin, which extends up from the Alberta-British Columbia border (INAC, 2011). The Beaufort Sea, however, is relatively under-explored in comparison to northern Alberta and BC (INAC, 2011). The most significant oil reserve in the offshore region in the ISR is the Amauligak well site, located 70km offshore at a depth of about 30 meters, with reserves estimated at 350 million barrels (Anderson and DiFrancesco, 2007). The Arctic region, however, is estimated to contain 30% of the remaining world's undiscovered gas reserves (Taylor et al., 2010).

Currently, there are $18,800 \times 10^7$ liters of discovered oil, and 458.7×10^{12} liters of discovered natural gas in the NWT and Arctic offshore area (INAC, 2009). The Beaufort Sea/Mackenzie Delta region in the ISR is estimated to have 39.7×10^7 liters of potential oil, and 679.6×10^{12} liters of potential natural gas (Anderson and DiFrancesco, 2007). Energy production in the NWT by value was estimated to be 58 million dollars of natural gas, and 438 million dollars of oil in 2001 (Bone, 2003). As of 2009, there were 12 exploration licences and 39 significant discovery licences in the Beaufort Sea (INAC, 2009); but, even with all of the oil and gas resource potential there have been zero production licences issued (INAC, 2009).

Demand for natural gas in the future is expected to push natural gas prices up (Taylor et al., 2010), which would indicate that production could eventually become economically viable in the Arctic. A strong demand for oil and natural gas products, as well as rising prices and new technology are all driving forces behind newfound interests in oil and gas exploration in the IRS (CAPP, 2005). With this potential development looming, it is timely to assess the environmental regulatory process and the stakeholders involved to see if a more regional or strategic approach could be used in development planning.

3.2 Environmental Assessment in the offshore ISR

Environmental assessment in the ISR is regulated under both the *Canadian Environmental Assessment Act* and the *Inuvialuit Final Agreement*. The *Canadian Environmental Assessment Act* may apply to any project where the government of Canada has ‘decision-making authority’ (including as a proponent, land manager, source of funding, or regulator), provided that project is not included on the *Canadian Environmental Assessment Act Regulations Exclusion List* (CEAA, 2011). The federal Act provides the legislative framework for EA within the ISR. However, all developments in the ISR are potentially subject to EA under the IFA, regardless of their size or magnitude of impact. When a federal authority is involved, a project can trigger both the federal and IFA EA processes, with decisions and various approvals for energy developments often undertaken in cooperation with the federal authorities responsible for energy development in the region, including the National Energy Board (NEB), the Department of Fisheries and Oceans, and Indian and Northern Affairs (INAC). Oil and gas resources in the NWT, and the processes for the development of those resources, are managed largely by INAC (Taylor et al., 2010). It is in this way, in INAC’s role as resource managers, that the federal government grants companies the right to develop oil and gas resources in Canada’s Arctic (Taylor et al., 2010).

3.2.1 ISR organization and co-management structure

Within the ISR regulatory system, under the IFA, two parallel organizational structures exist: the Inuvialuit Regional Corporation (IRC) and the Inuvialuit Game Council (IGC). The IRC is comprised of six community corporations, one representing each of the six communities in the region, namely Aklavik, Inuvik, Tuktoyaktuk, Paulatuk, Sachs Harbour, and Holman Island. The IRC is the primary corporate body of the ISR, and facilitates cooperation between the six community corporations and the Inuvialuit Land Corporation, the Inuvialuit Investment Corporation, the Inuvialuit Development Corporation, and the Inuvialuit Land Administration (The Community of Aklavik et al.,

2008). The Minister of Indian Affairs and Northern Development implements the legislation of the IRC on behalf of the Government of Canada (Joint Secretariat, 2004).

The IGC was established in 1978, representing also the six Inuvialuit communities, and the collective Inuvialuit interest in the ISR on wildlife management issues (IGC, 2003). The IGC works with several co-management bodies created under the IFA (see Figure 2), and works parallel with the IRC (IGC, 2003). Each community has its own Hunters and Trappers Committee (HTC), each of which has representation on the IGC. The HTCs, amongst other things, are responsible for local resource (wildlife) allocation, and are expected to encourage and promote Inuvialuit involvement in the regulatory process (The Community of Aklavik et al., 2008).

The Inuvialuit and the governments of Canada, the NWT, and the Yukon share responsibility for managing the ISR through various co-management bodies. The Joint Secretariat (JS) acts as an administrative liaison between the co-management bodies, as well as the IGC. The JS was incorporated in 1986, and its objective is to support and facilitate the interest and activities of the wildlife and environmental councils, committees and boards, established under the IFA (Joint Secretariat, 2003). The JS members and directors are made up of the five chairs of the five co-management committees and was established to enhance cooperative management between the Inuvialuit, and the governments (see Figure 2). These co-management groups are intended to have equal government (both federal and territorial) and Inuvialuit representation (INAC, 2005).

The Wildlife Management Advisory Councils (WMACs) provide advice to federal and territorial governments on issues relating to wildlife in the ISR. The WMACs are also involved in research on various species and on Inuvialuit traditional ecological knowledge. The Fisheries Joint Management Committee was established to advise the Minister of Fisheries and Oceans on matters relating to Inuvialuit and the ISR fisheries resources (INAC, 2005). The Fisheries Joint Management Committee (FJMC) works jointly with DFO to co-manage all fish, fish habitat, and marine mammals within the ISR,

and is responsible for collecting harvest information and making recommendations on subsistence quotas for fish and harvestable quotas for marine mammals within the ISR (Joint Secretariat, 2009).

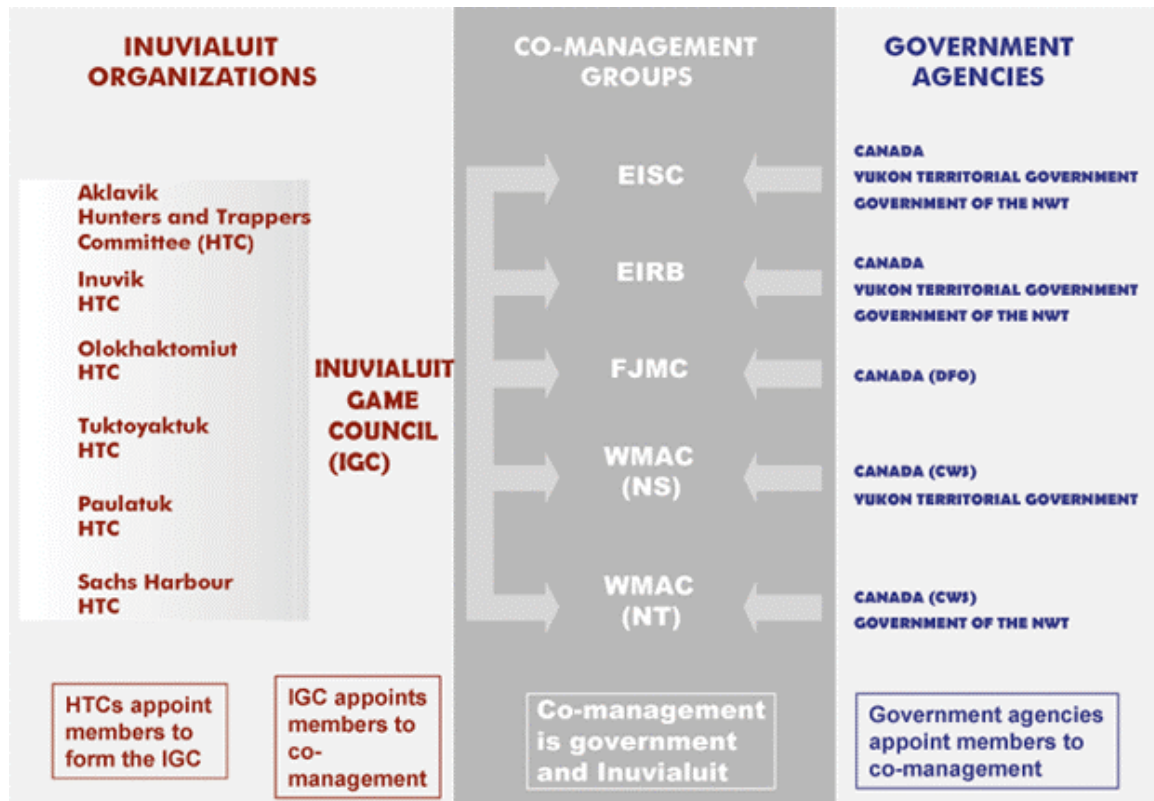


Figure 2: The co-management system of environmental regulation in the ISR.
Source: Joint Secretariat, 2011.

The Environmental Impact Screening Committee (EISC) was established in 1986 and has since screened over 700 development proposals, ranging from oil and gas seismic and drilling programs, to commercial river trips (Joint Secretariat, 2009). The EISC implements the screening portion of the IFA Environmental Impact Screening and Review Process (EISC, 2008). It works closely with the EIRB, and consists of seven members, including its chair; three appointed by the IGC, and one nominated by each of the Government of Canada, the Yukon Territorial government, and the government of the NWT (GNWT) (EISC, 2008). All developments in the offshore and onshore Crown lands within the ISR are to be submitted for screening, according the IGC under Section 11(1)(c) of the IFA (Joint Secretariat, 2004).

The Environmental Impact Review Board (EIRB) also operates within the scope of the IFA, and acts primarily as the review body for any proposed development referred to it by the EISC (Joint Secretariat, 2004). The Inuvialuit communities have the opportunity to document their values and land use practice recommendations within the Community Conservation Plans; one for each of the six communities within the ISR (Joint Secretariat, 2004). They also have the right to request an EA on any development proposal within the ISR as per the IFA (Joint Secretariat, 2004). The federal Department of Indian Affairs and Northern Development is responsible for appointing three members to the Inuvialuit EIRB, one from Canada, one from the Government of the Yukon, and one from the GNWT, and is also responsible for funding the EIRB (Joint Secretariat, 2004).

3.2.2 The Regulatory EA system in the ISR

The ISR offshore region is managed primarily by INAC, who decides to develop an area by sending out a call for bids. When INAC does this, the bid is one of three types: exploration, significant discovery, or production licences, and the Arctic Aboriginal groups are notified and are provided the opportunity to identify culturally or environmentally sensitive areas (INAC, 2009). Proponents have a maximum of nine years to conduct an exploration licence, with a drilling requirement in the first of two terms. If the proposed development receives approval, a significant discovery licence is issued, enabling the successful proponent indefinite tenure to the discovery. There have been no production licences issued to date in the ISR; if one were issued it would provide a 25 year term to the successful applicant with automatic renewals if the development is still producing (INAC, 2011).

Any development or activity of consequence to the ISR requires screening under the IFA if significant negative impacts on the environment or wildlife harvesting are expected (EISC, 2008). The IFA takes precedence over any other federal, territorial, provincial, or municipal law in the ISR concerning the screening of development proposals to the extent of any inconsistency or conflict between them (EISC, 2008). There is a two-stage

process under the IFA that involves the screening of all development proposals to determine whether there is the potential for significant negative environmental impact, and, if there is, subjects that proposal to further detailed public assessment and review.

The EA process is triggered when a project is proposed. The developer will consult with the various advisory and co-management bodies (e.g. FJMC, IGC, HTC, DFO, INAC, etc) to determine whether the project is deemed a 'development' under Section 2 of the IFA. If it is not deemed a 'development' then the license/permit can be issued. If the project is determined to be a 'development' then the proponent will begin the necessary application procedure for the required licences and permits. For oil and gas projects in the ISR, the developer also applies to the NEB, which is the primary responsible federal regulatory body, thus potentially triggering also the *Canadian Environmental Assessment Act*. Any water and land use permits are also applied for at this stage.

The IFA requires screening of all developments of consequence to the ISR that are likely to have a negative impact on the environment, or on present or future wildlife harvesting. The EISC carries out these environmental screenings (EISC, 2008). Once the EISC has reviewed a proposal it has one of four choices: (1) that the development will have no significant negative impact and may proceed without EA and review; (2) that the development, if authorized is subject to terms and conditions recommended by the EISC, will have no such significant negative impact and may proceed without EA and review; (3) that the development could have significant negative impact and is subject to EA; or (4) that the development proposal has deficiencies of a nature that warrant termination of its consideration and submission of another project description (EISC, 2008). If the EISC finds that the project will have no significant impacts, the project will be allowed to proceed and licences or permits will be issued, with or without recommended terms and conditions. On Crown lands, non-Inuvialuit bodies such as DIAND are responsible for attaching conditions to land use permits (The Community of Aklavik et al., 2008). If the project is determined to likely have a significant negative impact, the proposal will be subjected to further EA and review by the EIRB (Joint Secretariat, 2004). The majority of projects are assessed at the screening level.

If forwarded to the EIRB, the proponent must develop the environmental impact statement (EIS). Once the EIS is received by the EIRB the chair will designate a review panel, which will carry out a public review (EIRB, 2004). The Government of Canada is responsible to identify the ‘government authority competent to authorize the development’ for each proposal being reviewed by the EIRB, and the review panel consists of two permanent members appointed by Canada, two permanent members appointed by the Inuvialuit, and the chair of the EIRB (EIRB, 2004). The public review hearings are generally held in the community most affected by the proposed development (Joint Secretariat, 2009).

After gathering its information, the EIRB will prepare a final report with its recommendations on whether or not the development should proceed (along with any terms and conditions, including mitigation and remedial measures), and submit it to the appropriate federal authority (Joint Secretariat, 2009). The federal authority responsible for allowing the project to proceed must accept, reject, or modify the recommendations from the EIRB. Once cleared of the EIRB process, required permits and licenses may be issued (Joint Secretariat, 2009). The federal government is a significant participant in the co-managed EA process in the ISR, and ultimately retains the final say over which EIRB recommendations for development are approved. The federal government possesses the spending power, control over territorial expenditures, the regulatory authority to determine Arctic energy outcomes, and effectively has the power of a veto in the ISR regulatory process.

Projects subject to EA under the direction of the EISC and EIRB may also trigger the *Canadian Environmental Assessment Act*, provided there is a federal authority involved and a trigger for the Act (see Noble 2010). When the federal act is triggered, a project proponent must meet the requirements of both the EIRB under the IFA, and the *Canadian Environmental Assessment Act* under the Government of Canada. There are four types of federal EA, namely screenings, comprehensive study, mediation, and assessments by a review panel. Most assessments are routine screenings. A comprehensive study may be

required if the proposed project is large in scale or in environmentally sensitive areas, which includes mandatory public participation. Mediation can be conducted when the Minister of the Environment thinks that a consensus may be possible between involved parties for any unresolved issues. Projects may be ‘bumped-up’ to a review panel when the environmental effects of a proposed project are uncertain or likely to be significant, or when warranted by public concerns. Bilateral harmonization agreements can also be arranged to help prevent duplication by ensuring a project is only subject to a single environmental assessment that meets the legal requirements of all jurisdictions involved, and includes the use of a joint review panel (CEAA, 2011). There is also provision under the IFA for the EA process of the EIRB to be substituted for a panel review under the *Canadian Environmental Assessment Act*.

3.3 Data Collection and Analysis

The primary means of data collection was semi-structured interviews. Interviews are “a conversation with a purpose” (Valentine, 2005:111) and are useful for collecting a diversity of opinions and experiences, providing insights into differing opinions, as well as revealing consensus on some issues (Dunn, 2000). Semi-structured interviews were used in this research to explore current stakeholder knowledge of EA systems and practices for oil and gas development in the Beaufort Sea, and to identify potential opportunities for and challenges to advancing a system of R-SEA. With a semi-structured interview there is some degree of predetermined order of questions, but there is also enough flexibility to allow the participant to choose the way in which issues are addressed (Dunn, 2000). This enabled comparisons to be made between interviews, while ensuring informants had the opportunity to expand on their thoughts.

There are four prominent groups involved with oil and gas initiatives in the study area: Arctic community boards and agencies (e.g., Inuvialuit Game Council, Inuvialuit Regional Corporation); government regulators (e.g., National Energy Board, Canadian Environmental Assessment Agency, Government of the Northwest Territories, Department of Fisheries and Oceans, Environment Canada, and Indian and Northern

Affairs Canada); industry (e.g., Canadian Association of Petroleum Products, ConocoPhillips Canada, Imperial Oil); and ENGOs (e.g., Canadian Arctic Resources Committee, Pembina Institute, World Wildlife Federation). Potential interviewees were identified from these four groups based on their experience and select knowledge of the study area and of its environmental regulatory process. An initial list of participants was identified with help from a number of key informants from the Canadian Association of Petroleum Producers, Connoco Phillips, the Canadian Environmental Assessment Agency, and the Inuvialuit Regional Corporation. A snowball sampling design was then used, whereby initial interviewees were asked to identify other potential participants as the research progressed (see Valentine, 2005).

A total of sixty potential participants were contacted via email or telephone with an invitation to participate in the study. An April 2009 workshop in Calgary, focused on cumulative effects assessment frameworks in the Beaufort region, was also attended to meet potential interview participants and to gain insight as to the current state of affairs of regional and strategic EA initiatives in the study area. A total of 28 interviews were conducted from 13 April 2010 to 15 October 2010, ranging from 15 minutes to three hours in length (see Table 4). Interviews were conducted both in-person and over the telephone with industry, federal regulators, and ENGOs, depending on the geographic location of the participant. Interviews with Arctic community boards and agencies were mainly in-person at Inuvik.

Interviews focused on five main themes, namely: perceptions of the current state of practice of EA and the regulatory approach to offshore oil and gas assessment and regulation in the Beaufort region; knowledge of regional and strategic EA; requirements to advance a more regional and strategic approach to EA in the Beaufort; challenges to doing so; and lessons learned from efforts to date. Results were analyzed qualitatively, allowing for identification and interpretation of themes emerging from the data (Corbin and Strauss, 2008). The data collection phase was considered complete once the point of saturation was reached and key themes and ideas started to repeat.

Table 4. Research participants organized by group.

Group	Organization	# Interviewed
Government		
	Canadian Environmental Assessment Agency	2
	Department of Fisheries and Oceans	2
	Government of NWT	1
	Indian and Northern Affairs Canada	2
	National Energy Board	2
	Parks Canada	1
Industry		
	Canadian Association of Petroleum Producers	2
	ConocoPhillips Canada	1
	Imperial Oil	1
ENGOS		
	Pembina Institute	1
	World Wildlife Federation	1
Northern boards and Agencies		
	Co-Management Board	1
	Fisheries Joint Management Council	2
	Inuvialuit Game Council	2
	Inuvialuit Regional Corporation	4
	Joint Secretariat	3

Interviews were recorded with a combination of note-taking and audio-tape.

Hypertranscribe © software was then used, a software that allows for audiotape looping, to transcribe the interviews into text documents. Once the data were transcribed the information was thematically coded and analyzed using NVivo © qualitative software. Higher-level concepts were first grouped into themes of shared properties, thus allowing a reduction and combination of data (see Corbin and Strauss, 2008). This was followed by microanalysis: a detailed coding process within themes based on emerging concepts, also known as coding down (Lockyer, 2004). Analysis was concluded once the point of saturation in themes emerged. Corbin and Strauss (2008) explain the point of saturation as ‘when no new data are emerging’, as well as the point where categories are developed according to their properties.

Finally, it is important to note the research biases and limitations. Not all stakeholders in the ISR were available to be interviewed, which reduced the scope of data gathered.

Also, time and financial constraints did not allow for all interviews to be in person, so phone interviews were used as a substitute, to the possible detriment of the quality of participant responses. Coding was done with the author's personal bias potentially eliminating or affecting some of the themes that emerged, which could have slightly biased the results and conclusions. The author tried to be aware of these limitations and biases as much as possible, and tried to keep their effects to a minimum.

CHAPTER 4

RESULTS and DISCUSSION

4.0 Introduction

Results of the semi-structured interviews are presented and discussed thematically in this chapter. First is an examination of participant's perceptions of the current state of practice of Environmental Assessment (EA) in the Beaufort region. The next theme reports on participant's knowledge and expectations of regional and strategic EA. The third theme examines regional and strategic EAs' potential value-add to offshore oil and gas planning and development, while the fourth theme discusses the risks and perceived 'value-lost' of implementing regional and strategic EA. The chapter concludes by looking at the opportunities and challenges to advancing a more regional and strategic approach to EA in the Beaufort region.

4.1 Perceptions of the Current State of Practice of EA in the Beaufort Region

Participants were asked to discuss the efficacy of EA – what they considered to be working well with regard to EA for oil and gas in the Beaufort region, the main challenges to the current practice, and whether these observations were true for both offshore and onshore environments. The strongest theme that emerged with regard to 'what's working', identified by nearly half of the study participants, was consultation and engagement.

Consultation and engagement were identified as strong features of current EA practice in the Beaufort Region, as one participant commented:

“There's good engagement between industry and the NEB. I believe also between industry and the Inuvialuit. I think they are consulting with the Inuvialuit quite a bit on how they are planning to approach their applications and ultimately their projects...for exploration. So I think the dialogue is working well” (Government, INAC).

Another federal regulator spoke about the good engagement with the Inuvialuit community, noting that it “is probably one of the main ingredients right now, that they are plugged directly into the regulatory process” (Government, CEAA). Only one participant from the industry indicated that the current regulatory system provided good protection for the Inuvialuit community, stating that “the current regulations for the offshore Beaufort are adequate...we have a good system when it comes to...protection of the people”. Most participants from industry did not express this view, with some noting that the system “basically works up in the offshore,” but “generally, we don’t have a lot of flattering things to say about the regulatory system in the north” (Industry, CAPP). One Environmental Non-governmental Organization (ENGO) participant with direct involvement in northern affairs for oil and gas development agreed with the federal government in that there is good consultation and engagement with the Inuvialuit, noting that “what’s right about the process so far is actually the Inuvialuit part, at least through the environmental impact steering committee.”

Participants from many of the Inuvialuit boards and agencies were divided regarding ‘what is working’ about current EA. Many noted good stakeholder engagement and consultation, while others simply went directly to ‘what is not working’. For example, a member of one Inuvialuit co-management board commented:

“I think that the bodies that the Inuvialuit have set up, sort of as a result of their land claim, like the environmental impact screening committee, the environmental impact review board, and the various co-management boards under the land claim, have been working for twenty five years now, and I think they do work well.”

A member of the Inuvialuit Joint Secretariat similarly commented:

“With the nature of how things work up here, I do think that there is much more consultation that’s happening up here than there would probably anywhere else. Especially something that is as big as oil and gas development, which I know that in other parts of the country, Aboriginal groups would barely get a meeting. That is the environment, and the political environment that is up here, that is set in place, but its also because the community demands a voice, and they realize they have a voice, so they want to use it, and I think that’s one of the biggest steps is that they still have a desire to speak out.” (Inuvialuit Boards and Agencies, Joint Secretariat)

Other comments like “I can tell you what’s not working” and “I don’t see very much working these days at all,” were common amongst the Inuvialuit board and agency participants.

There were several additional observations that were not raised by every participant, but are important to note. One participant from DFO, for example, thought that the current system allowed for adaptive management; another participant from Parks Canada thought that the process was very clear, not only to their agency, but to all stakeholders involved in the process. Participants from CEAA noted that industry is recognizing the need for a more regional approach, and they saw this as something that was working regarding the current approach to EA in the Beaufort region. The same CEAA participants also noted that the offshore environment and regulatory EA system is less complex than the onshore environment in the NWT, noting that, with the federal government and the Inuvialuit Settlement Region being the only two lead players, there is much less complexity and tension between stakeholders.

One proponent, from an Arctic oil and gas company, noted that there was good protection of the environment within the current approach. A participant from the Inuvialuit Regional Corporation raised the integrated regulatory approach as something that is working for environmental protection, noting well-integrated ecological approaches to scientific understanding of processes in the Beaufort. Several participants stated that the current approach to EA in the Beaufort is working just fine, and that the organization and structure and the legislation that supports it are effective.

4.1.1 Challenges to the efficacy of EA

Participants identified several challenges to the current approach to EA and regulation for offshore oil and gas in the Beaufort region. Most apparent was the range of responses, including challenges specific to the practice of EA, uncertainty and efficiency of the EA process, duplication and coordination, capacity to implement EA, and regulatory programs. Each of these is addressed below.

4.1.1.1 Challenges specific to the practice of EA

A common challenge concerned data to support EA in the study area. One participant noted the lack of data in general, stating, “data is a huge issue, we don’t have a lot of it up here” (Government, DFO). Most other participants, however, thought that there was considerable data on the study area, but there were concerns about data reliability, accessibility, and coordination to support EA efforts. For example, one participant from the federal government commented on the shelf life of data collected in the study area, stating that “this lack of memory, this lack of ability to do an analysis, find it again, and believe it, and use it, is almost totally absent; ...when they find it again, they say...well, nobody's around who did this, and the communities aren’t going to believe it, they weren’t involved” (Government, NEB).

Inuvialuit boards and agencies expressed concerns about accessibility and coordination of data in the study area. As noted by one participant, “one of the issues is that there is really no repository of data...no one organization that is taking data from historical things that have been done, and present things, and putting them all together.” Participants from ENGOs agreed. One participant from the Joint Secretariat expressed concern over the lack of support for the latest data coordination effort in the region, the Beaufort Regional Environmental Assessment (BREA), received from federal government, noting that it “was a pretty significant opportunity to follow up on the recommendations that came out of BSSrPA, but unfortunately it got to the point where submission was made to charge the board, and it got turned down.”

Another Joint Secretariat participant viewed the federal government as being responsible for ensuring that there is enough baseline data to make informed decisions on EAs. This participant went on to express further concern that, if left to the proponents to collect the regional data for their EAs, it creates a very unpredictable regulatory EA process, “...then you have to wait until [the proponent’s] put in a development proposal, and then you have to assess that; ...you may have potential for a major impact on lake trout populations, or whatever, but you haven’t got enough baseline data.” This can put the

government in a difficult position when assessing EAs that cost proponents significant amounts of money, by allowing the proponents to explore the development area, such as a lease block, in the first place. One ENGO participant spoke to this same issue, stating:

“...when oil and gas rights are issued, that is the first step of development. Companies are committed, they have either paid cash, or they have committed to a certain amount of work, and then its later in the stage that an EA is done, after the proponent has decided they want to go forward with the project, its later that the EA is conducted, but yet, in many ways, the project has already begun. And it becomes hard for government to say no.”

Closely related to the above, another common identified challenge specific to the EA process was the lack of a regional approach. Currently the EA process does not adequately consider the political and regional environmental context within which development is being proposed. All participant groups identified this as one of the main challenges to the current process. A participant from INAC, for example, pointed out that “they [proponents] are not required or enforced to look at a regional perspective....there is a lack of regional perspective in the EA process.” However, the participant went on to note that “this is a general issue, but is certainly evident in the Beaufort.” A participant from one of the Arctic boards agreed, noting that project EAs don’t “fit within some kind of strategic context, I don’t think there is a thought-out process for that; it may be more reactive than integrated and proactive.” A representative from one of the Arctic oil and gas companies in the region expressed this as a problem of scale in EA:

“EAs are little microcosms, and they measure against what? They measure against what was there the day before, and then the next one measures against what was there the day before, so if you look at it over time there could be significant change but each EA says, incrementally, were not doing anything different. And I mean, that’s classically the challenge with EA vs. a broader SEA or REA.” (Industry, ConocoPhillips Canada)

Due to this lack of a strategic approach within the current EA process, effectively addressing cumulative effects was also identified as a challenge. Government, ENGOs and representatives from Inuvialuit boards and agencies all identified the problems of cumulative effects assessment, but, interestingly, industry representatives did not raise the issue specifically. One member of an Inuvialuit co-management Board explained:

“...the majority of the people on the coast, including Tuktoyaktuk, still rely a lot on the land and the animals for subsistence. And they do know that if a big project comes on-stream, no matter what you do, the cumulative effect is going to be huge, and it might not be that noticeable, but if you put everything together that has happened, then it becomes a bigger problem, even into the future.”

Another participant from the North similarly expressed the challenge of cumulative effects, explaining:

“If you look at the screening committee guidelines, I don’t think you would even see the word cumulative impacts. If you look at the timing of the land claim, and the various organizations that came out of it, being 1985, and the development of sort of environmental assessment thoughts and practice. It was at the beginning of those types of concepts, and so the broader based stuff didn’t get written directly into it. Not that that’s an excuse, but I think that’s kind of what’s happened.”

A participant from the federal government simply noted that “cumulative effects are not effectively addressed” (Government, Parks Canada), while an ENGO participant argued that “usually cumulative effects management comes into place later on, after a project is proposed”, but that “cumulative effects of projects should be done way before the rights are issued, and it should be part of land use planning.”

A final challenge that was raised specific to EA process regarded dated policies and legislation, but this was raised only by industry and ENGO participants. For example, one participant from industry raised concern over the same season relief well drilling policy existing currently in the study area, which must be included in EA design and application, noting that “the same season [relief well drilling] policy was developed and designed for shallow waters in the Beaufort... It simply cannot be applied to deep water.” While deep water drilling policies concerned industry, an ENGO participant voiced concern over the way exploratory rights are issued in relation to EA, stating that “in other jurisdictions there is an EA that is conducted before the rights are issued, and you can call that an Strategic EA (SEA), or a pre-tenure plan, and in my mind that is exactly what needs to happen in this region...the first step of development.” Currently, legislation in the study area considers a project in the development stage only once the EA has been approved.

4.1.1.2 Uncertainty and efficiency

Participants from every group, with the exception of ENGOs, noted uncertainty, in some capacity, as a challenge to the current EA process. Some referred to uncertainties in relation to understanding of the EA and regulatory process itself; others, including a participant from the federal government, noted that the multitude of players involved in the current EA regulatory process in the study area adds to process uncertainty – specifically the size of federal EA hearing panels and the need for fewer players at the table.

Many issues of uncertainty, however, were largely exogenous to the EA and regulatory system. For industry, for example, the volatile economic environment in the Beaufort region and within Canada in general, was identified as a main challenge to the EA process. As a participant from CAPP explained, “...it doesn’t take a big swing in the economy to make a huge shift in the economics of a project up in the north, because its remote, particularly offshore.”

Each group of participants also had a certain concern about efficiency that was not shared by participants as a whole. For example, a federal government regulator noted that the lack of human capacity lengthens the amount of time it takes to appraise an EA, stating that “it takes a lot of time because, again it’s one project by one project and there’s only one of me.” However, another government participant, from a different agency, stated that the timeline issues may have more to do with planning than with the project-by-project review *per se*. A participant from industry noted that they want the process to be shorter than it currently is, but they would be happy with just a guarantee that there is a maximum time that a project EA can take. The participant challenged the efficacy of EA, stating:

“We need to stop and evaluate if they even work. Is EA a tool that works anymore? And I’m not saying that they don’t work, but I’m just challenging it. You prove to me that they do work. The EAs that I have read, there are definitely aspects that need to be there, but the EA package now, I think it’s more about the package than it is about the benefit. And so in the end, I would like somebody to look at some classical EAs and see how the assessment itself, and the work that

was done, changed the outcome of the approval or not approval...could you have done it without the EA?” (Industry, ConocoPhillips Canada).

Quite the opposite, another participant from the federal government expressed concern over efficiency in terms of current efforts to lessen the requirements of EA, stating that “what we see, I think, is the steady diminution if you like, or lessening of oversight or examination, and that’s more in the strict EA type of setting” (Government, CEAA). An ENGO participant raised similar concerns, saying that EAs did not occur early enough in the process, and that exploration and seismic activities did not trigger EAs. A participant from one of the Inuvialuit boards and agencies also addressed this timing issue, noting that “they [federal government] don’t give enough leeway time; its ‘right-now’ type of thing, we barley have enough time to sit down and go over all of them to make any comments as an HTC, or as a community.” This frustration about efficiency in EA was also relayed by another participant from one of the Inuvialuit boards, saying the matter is “...just a lack of preparedness to handle any kind of oil issue in the Beaufort Sea.”

4.1.1.3 Duplication and coordination

Another challenge identified by most participants concerned overlap and duplication of EA related efforts and processes. Industry specifically addressed concerns about duplicative EA systems, noting that they tried to work together when both IFA and CEAA processes “bumped up” from a screening-level EA, but that greater clarity was needed around each of the two processes. For example, one industry participant stated that “the overlap is definitely an issue; ...you’ve got the IFA process and the CEAA processes, which have sort of worked together but...I think there could be greater clarity.” Participants from the Inuvialuit boards and agencies tended to agree that there was duplication built into the current EA process, but seemed to accept this as a challenge that the system would always have, hinting that the Inuvialuit boards and agencies are less willing to consider changes to the current process. For example, one participant noted that there always has been overlap between regulatory agencies, and that “...you’re going to suffer some of the consequences of that any time you bring in multiple levels of government...”

ENGOs and government participants also identified duplication in the CEAA and ISR EA process, with one participant from the government of the NWT noting that anything offshore is duplicative, getting an automatic CEAA assessment, similar to a comprehensive study EA. The participant explained that this process was separate from that of the Inuvialuit Settlement Region (ISR), and in the ISR there is an environmental impact review board that examines the exact same proposal. In sharp contrast, however, one federal participant argued that the issue is not so much duplication as it is a lack of understanding of the difference between the two systems:

“In terms of overlap and duplication, people tend to complain about that a lot, but I think there is a lack of understanding that the two main processes that take place here, we have CEAA and the Environmental Impact Screening Committee (EISC) which is the co-management body. They are based on two completely different value systems. So the EISC looks at wildlife enhancement, Inuvialuit way of life, at the different value systems; whereas CEAA looks at significant environmental effects. So even though they are two parallel processes, sometimes they are happening at the very same time, were pretty much doing the same assessment of them, but just based on different values, and I find myself explaining that a lot, even to people within, regulators.”

4.1.1.4 Capacity

A final challenge identified concerning current EA and offshore oil and gas regulation in the Beaufort concerned capacity. Several participants addressed high staff turnover, which they felt lead to a lack of consistency in EA decisions made. One representative of the NEB, for example, explained that “the players, staff turnover...this lack of memory, this lack of ability to do an analysis, find it again, and believe it, and use it, is almost totally absent.” A participant from one of the Inuvialuit co-management boards agreed, stating that two year election periods on Hunters and Trappers Committee’s (HTC) boards was a challenge, because “if these guys were there for two years, they caught on and got involved with something, but then their two years are up...then it has to start all over.” Financial capacity was also a concern, identified by a participant from one of the Inuvialuit co-management boards as the number one challenge, questioning who was going to supply financing for future EAs that seem inevitable in the Beaufort region. Another participant from federal government raised the capacity challenge with regard to

impact mitigation efforts in EA, particularly the limited emergency response capacity in the region.

4.1.2 Challenges unique to the efficacy of EA offshore

Participants were almost equally divided as to whether the challenges raised regarding the current EA process were unique to the offshore environment. The majority of participants from government agreed that the challenges were not unique to offshore, while industry, ENGOs, and participants from the Inuvialuit boards and agencies were divided on the issue. Those participants who said that the challenges were *not* unique to the offshore environment noted that having the settled land claims in the offshore region helped frame the roles and responsibilities for the various stakeholders. For example, one federal government regulator stated that “we have the benefit of having settled land claims, so that helps to frame the roles and responsibilities.”

Participants who thought that the challenges *were* unique to the offshore environment pointed to technical and regulatory issues. Technical challenges raised included the deep-water environment and the unknowns that face oil and gas initiatives, including a lack of data. One ENGO participant commented that “the environmental risks are that much higher when you are working in water.” A participant from the Joint Secretariat stated that “the issue simply is the fact that there is such a lack of data on really what’s happening in the offshore.”

The complex political environment was also noted, as well as the fact that there has been little development thus far in the Beaufort short of seismic exploration, and exploratory drilling in the 1970’s and 1980’s. One ENGO participant thought that the offshore environment is “a bit simpler because there’s not as many [interests involved], the jurisdiction is a bit less complex than it can be in an onshore environment.” The same participant went on to explain that there were few sectors to deal with offshore, as well as a clear federal jurisdiction. However, a participant from one of the Inuvialuit boards

disagreed, stating “there is more regulatory understanding for the onshore...but I think there is more ambiguity and jurisdictional difficulty.” Another participant from one of the Inuvialuit co-management boards agreed, stating:

“In the offshore, it gets a lot more fuzzy. Depending on the nature of what you’re talking about may affect who the players are at the table, who you need to have discussions with. So, I would say that the offshore challenges are greater than the onshore - both in terms of jurisdiction as well as the logistics and technical aspects of drilling and production.”

As a participant from industry nicely explained

“as soon as you put your toes into the water, everything goes up about 100 fold - cost, effort, time, and it’s got a lot to do with just logistics, it has a lot to do with safety, it has a lot to do with weather; doing work offshore is certainly an order of magnitude more complex than say the Delta.”

4.2 Participant Knowledge of and Expectations of Regional and Strategic EA

Participants were asked to discuss their understanding of regional and strategic EA, including the potential advantages to a more regional or strategic approach to EA in the Beaufort Sea, and what such a process might deliver and to whom. There was considerable variation in participant’s understanding of the nature and role of regional and strategic EA. As one participant from the federal government said, “no one knows what REA or SEA is; there is no common definition, there is no common legislated requirement for it, there is no certainty as to the benefits that it might bring.” A participant from industry noted the need to “distinguish or draw some definitions around regional or strategic because in terms of what an ‘EA plus’ could deliver, there are all types of things..., and I think that’s where some of the current confusion lies.” Various participants from the Inuvialuit boards and agencies identified their own lack of understanding as a challenge, with one participant noting that “if you asked me to define SEA, I wouldn’t be sure of what it was.” Collectively, however, two distinct schools of thought emerged from the results: those who perceived regional and strategic EA as one of the same, and those who perceived regional EA and strategic EA to be two very different approaches.

4.2.1. Regional and strategic EA viewed as ‘the same thing’

Slightly more than half of participants did not distinguish between a regional and strategic EA, answering questions about the potential for a broader approach to EA with no separation, with many addressing the approach as Regional Strategic Environmental Assessment or ‘R-SEA’. Participants of this view included all groups (i.e., government, ENGOs, industry, Inuvialuit boards and agencies), but the majority were from Inuvialuit boards and agencies with the minority from government, industry, and ENGOs. There were some government participants who made a slight distinction between regional EA and strategic EA, but then backtracked and stated that they used both terms in the same way. For example, one participant stated: “I see clear advantages to a regional or strategic approach, by which we mean greater than project by project, and I use those terms interchangeably.” The participant went on to explain, “when I look at definitions of regional and strategic they seem like the same thing to me, except for the Cabinet Directive, which seems a bit different.” This was similar to another federal government participant, but from a different agency, who also recognized the Cabinet Directive and its connection to SEA, but at the same time said “let’s just talk about SEA and REA in the same breath.”

When asked to describe what they saw as the fundamental purpose of and advantages to a regional and strategic EA approach, many suggested that R-SEA would provide increased certainty or clarity to the regulatory system in the Beaufort Sea. For example, one federal regulator noted that “it would provide clarity to the industry, which they always are seeking.” Industry participants tended to agree, with one adding that “I think it has to deliver benefits to all three of those groups. So I think it has to deliver to the Inuvialuit and local people, it has to deliver some confidence.”

All participant groups viewed R-SEA as something that should help identify data gaps, as well as provide a means to establish a regional database. For example, one government regulator noted that “we could identify the environmental impacts before hand, identify our information gaps, and start to work to fill some of those...for the regulators, and

managers, to assist in making those decisions.” An industry participant spoke to what proponents in the study area expect of R-SEA, noting that “we want the baseline data, you want to have the information, you want to have the feedback and information from stakeholders so that you can plan and see what’s going on.” A participant from an ENGO agreed, stating that “ideally, it would also allow us to get our data in order too.” A few participants from the Inuvialuit boards and agencies viewed R-SEA as delivering a regional database. For example, one participant noted:

“From a strategic and regional perspective, understanding baseline conditions and identifying indicators to monitor are crucial; we don’t have that, we don’t understand ecological processes from an ecosystem perspective...we don’t know how to define what healthy ecosystem function is, so we don’t know which variations and which indicators might point you in the direction that an activity was having a significant and irreversible impact.”

The most agreed upon purpose of R-SEA in the Beaufort was that of developing a regional vision and a future plan for the offshore region. For example, as one federal regulator explained:

“You get a regional perspective, another fundamental purpose is that you develop a regional plan for the area, so there’s a vision moving forward in terms of how much development is acceptable, where such development is acceptable, and this is the result of the analysis at ideally an early stage of development, where you can actually say, you know, ok, this is where we are going to start to get concerned in terms of our, if we start detecting effects, at this level of effects we are going to start to get concerned, so that’s established early on. That’s sort of that plan for when do you start to take notice of things going wrong, and you develop a plan for watching for these effects.” (Government, INAC).

An ENGO participant echoed this sentiment, noting that “the benefits are that you can essentially establish a vision...and then you can track against that and monitor to see whether you are going where people want to go.” This idea of a regional vision was thought by participants to help establish appropriate development levels, as noted by one Inuvialuit board and agency participant, who expressed that you could then evaluate different levels of development from a strategic perspective, and “...say ok, here is what the likely results will be of 2 wells, 10 wells, 50 wells, and then go to the people that live here, and say where is your level of acceptance.” Participants from the Joint Secretariat, as well as the Inuvialuit Game Council, also saw benefits to R-SEA in establishing such a regional vision. For example, one participant stated that “you get the bigger picture view

of things, and can do planning and assessment on the ecosystem scale.” The participant went on to explain that “when you constrain the scope of the assessment, it causes difficulties because...it [an impact] may happen in that one location but the impacts may be felt in a much broader area.”

In this regard, some participants saw an R-SEA as a means to narrow a project EA by dealing with common regional issues upfront. For example, one federal participant noted that “you want to do your generic up front stuff, identify and solve the big problems, that’s what...regional EAs all about...get those out of the way.” An industry proponent agreed with this sentiment, stating that:

“It will, if it’s done right, facilitate a more focused EA, and an EA that can be carved out to address the key issues. So instead of doing 80% of the information gathering that may be unnecessary for an application process, it’s data for data sake, we don’t want to pay for that. What, instead, we would like to see, is, ok, ‘here are the three big things that came out of a regional plan.... And then you kind of go, ok, instead of doing this broad EA, now we know what the issues are, were going to put 80% of our effort towards those three things, and then the other stuff we will handle as it comes up....The EAs go from large to smaller, but they are fitted into a scale that is large.”

Participants from the Inuvialuit boards and agencies saw this as fundamental to R-SEA, with one participant noting that it should be “trying to gather as much info from the broad scale as possible, and trying to answer some of those key questions that may be required as part of the project specific EA,” and “because there are some overarching issues and questions that every project has to answer...they don’t need to keep repeating the same thing over and over again.” In adopting such an approach, an R-SEA was seen as having the potential to help regulators establish ‘no-development’ zones, in that “if you manage things in a larger holistic kind of framework then you can possibly identify areas where you can absolutely say no.” Added to this, several government participants saw potential for R-SEA to contribute to adaptive management, which incorporates new information as it is obtained to best inform environmental management decisions, moving the EA process from a linear process into a cyclical adaptive process. One government participant explained that “if your understanding of effects starts to change..., or if the detection of effects happens sooner or later than you had anticipated, you can alter your

plan accordingly.”

Participants also viewed R-SEA as a tool to help facilitate increased consultation and allow for better stakeholder communication. Industry, for example, emphasized R-SEA as delivering a multi-stakeholder process whereby “everybody benefits... there is no drawback.” One federal participant similarly noted that “in the end, even the fact that you have the appropriate people in a room talking about things is helpful.” Another added that “its fundamental purpose would be to include as much local involvement as possible, ..taking into account... traditional knowledge that has been observed from people who have resided in this area for their entire life.”

4.2.2 Regional and strategic EA viewed as separate processes – SEA and REA

Slightly less than half of the participants considered regional and strategic EA as separate but sequential approaches. Participants with this view were from government, ENGOs, industry, and Inuvialuit boards and agencies. The majority were from government and industry. Those who viewed regional and strategic EA as separate often referred to the federal Cabinet Directive on SEA, indicating that they viewed strategic EA primarily as a regulatory process. For example, one government participant explained that “the [definition] that’s closest to our mandate is one that is pursuant to the Cabinet Directive in terms of undertaking a strategic EA to inform a policy decision, and in our case the policy decision is one around issuing rights in ...the Beaufort.” An industry participant similarly made the connection with the Cabinet Directive, stating that SEA was fundamentally a government approach and that “one could argue whether there has ever been an SEA for the Canadian Beaufort.” One ENGO participant also identified SEA as specific to government agencies, that “the idea is that government agencies conduct EAs of their own programs and policies.”

Almost all participants who identified regional and strategic EA as separate processes said that an SEA should deal with policy decisions. One government participant referred to the case of same season relief well drilling in the Beaufort, explaining “we were

attempting to deal with that issue in more of a policy framework outside of an individual project - ...why is this policy here, what are its merits, what are alternatives...” An industry participant agreed, noting that an SEA is designed to make decisions on policy matters, noting, as an example, that “since INAC made a conscience decision a few years ago to start issuing calls for nominations for deep water, I can only assume that somewhere in that organization that they made a policy decision that they wanted to go further offshore.” Another industry participant further explained:

“I think strategic EA is more of a policy-type approach; it’s about the consideration of options and the identification of a path forward; it’s about identifying your strategy - what are the options we want to pursue. Do we want to pursue oil and gas development, do we want to pursue more of an onshore thing, do we want to pursue uranium mining... But you can consider these options and identify the issues and so, and I think you can do that at different levels.”

The same industry participant went on to explain that, in terms of SEA, even if the policy decision was that there should be ‘no development’, there would be frustration but no money lost. The participant explained that in an area where the government is not currently issuing leases you could do an SEA and there would be no real loss to industry at that point if the decision remains unchanged, and if they do identify areas for lease issuance “then you are better informed going in”. Once rights have been issued, “you can make the decisions you need to make about your land base, but you are going to have to address compensation for existing rights holders if you are affecting their right.” In this same context, another industry participant expressed frustration with the timing issue of SEA, arguing that when a company is issued an exploration well in the offshore they drill because they expect that they are going to discover a commercial quantity of oil and or gas and move into development. The participant argued that this is not the time to do a SEA, “it’s a little bit late.”

Some participants from the Inuvialuit boards and agencies also viewed SEA as something connected largely to policy decisions, and a process best suited to issues such as spill regulations, same season relief wells, best practices, standards and regulations. Similarly, an EGNO participant identified SEA as means to address broader issues such as rights issuance, noting that SEAs should “look at all of the rights that they are planning to issue in a particular area, and say, is this appropriate? If we issue them all at once,

what would be the impact, if we issue them on a timed basis, or do we have limits on the amount we should issue, that kind of thing.” A Inuvialuit board and agency participant echoed this sentiment, noting:

“INAC wanted to do something for leases, so they opened up a whole track of the Beaufort Sea for the bidding process, but what they needed there, before they started that, was strategically what would we like to reduce, and generally what is the possible conditions that we would release. So to me that’s only a slice of the strategic policy issue with the Beaufort Sea, and I mentioned one before, OK, what are the limits of development, what can the whole Beaufort Sea sustained.”

Many participants from the federal government described SEA as a higher-order process that could provide scope for REA baseline data collection. Interestingly, though, one participant, also from the federal government, described an SEA in terms of using information collected *from* the REA. This participant explained that “when an SEA would come in and look at something like oil and gas development in the offshore, or a new policy that would come in...I would use the REA as the baseline for my SEA.” This was contradictory to most participants who thought that SEA should be the first layer of the EA process. As one industry participant explained, “let’s start with SEA because that’s what I think should proceed REA in some sense.”

For most participants, then, REA was understood as a tool to provide a regional vision and a plan for the future of the Beaufort offshore area. For example, one federal government participant noted that an REA should be “more of like a long term look at a region.” All participants who viewed SEA and REA as distinct processes agreed that an REA should not be addressing policy-type decisions. As one government participant put it, an “REA doesn’t assess things in terms of how one policy or one type of development would affect it.” An industry participant echoed this, noting that when they were working on BREAs, which they considered an REA, “it was very much a regional exercise, it was not a strategic, it was not about the consideration of options.” That said, one ENGO participant expressed that, though separate, REA should have policy backing, stating that:

“It has to have really clear policy connections from government as to what their accountability is, and how they are going to implement the plan, and that’s one of the risks I see with the approach in the Beaufort. So I would like to see that with

the regional assessment in the Beaufort, that it be connected to the government coming out with a policy statement on environment management in that region, and that, so that's a regional assessment.”

Further, most participants understood REA as a process that would focus on the collection of regional baseline data. For example, one government participant saw an REA as “having a better correlation of baseline data on a regional level.” Another government participant agreed, stating that “it’s basically a baseline look, so that you have that, when something does come in and affect it.” Some industry participants similarly viewed REA as something that could help regulators make decisions once the baseline data were more complete. For example, one industry participant noted that “the REA could help if in fact the regulators in particular were able to reach a conclusion that there is a sufficient data base to allow them to make informed decisions on applications that come in” and “if and when we put an application in, we would just pull that decision off the shelf, put it into our application, and say ‘there’.” Another industry participant was more concerned about how REA would help with monitoring, stating that “depending on how it is designed, if it’s, in fact, more of an ongoing monitoring requirement, that may alleviate certain post-project monitoring requirements, because this is all about cost efficiencies; governments can’t do this all on their own, and they don’t.” The participant went on to explain that if conceptualized as an on-going monitoring program for regional environments, to which companies redirect some of their own resources in support, REA could “have a real meaningful output for everyone.”

4.2.3 Participants’ understanding of other participant’s views of regional and strategic EA

One question posed to participants was whether they saw any consensus about the nature and role of regional and strategic EA in the Beaufort Region. There were only a couple of participants from government who saw a general consensus, one of which drew on the recent BREa experience and noted, “I don’t think everyone was on a different page....industry was at the table during the development of BREa; there was buy in from government and industry.” The majority of participants, however, acknowledged that

there is little agreement and a lack of understanding regarding regional and strategic approaches to EA amongst the group of interested stakeholders of oil and gas initiatives in the Beaufort region.

One federal government participant noted “there is varying opinions on what a regional EA and a strategic EA could be,” and others commented that the Inuvialuit communities do not seem to be aware of what regional and strategic EA mean; though, another federal participant stated that “the Inuvialuit were certainly the most supportive of this initiative [BREA].” A number of government participants thought that industry was primarily looking for certainty in the EA process, and that there was concern regarding the addition of another step, such as regional and strategic EA, with one participant noting that “the last thing they [industry] want is for additional complexity to be added...they are really concerned that this would slow them down” (Government, INAC).

A participant from industry identified confusion at the federal level within government itself, stating that “at a table in Ottawa, within the federal family, there continues to be a large amount of confusion...throwing around terms like R-SEA, REA, SEA, place-based approaches to resource management.” The participant went on to question whether they were different and “how would you use one in one context and another in another...people are really getting hung up on the terminology and failing to fully identify what they might see as needs and objectives for a process.” ENGOs were also not seen by industry as being on the same page, with one participant noting that “when it comes to the environmental groups, they are all over the board.” From the industry perspective, participants cautioned that “everybody sees it differently right now,” that it was important to get “tight definitions around an REA, SEA”, and that when the BREA initiative was started “a lot of people envisioned it as a strategic one, so you need to be clear about what it is and what it isn’t, and if it’s going to deliver for you or not.” An ENGO participant summed up the ENGO groups thoughts concisely, stating that “there is considerable confusion around what R-SEA is and isn’t, and how it’s different from REA, and frankly from how it’s different from just creating data portals.”

The Inuvialuit boards and agencies echoed the above statements, noting that within the group of interested stakeholders “they are not coming at it in the same way.” Opinions on what industry was looking for included certainty, as well as some concern over regional or strategic EA adding another level of bureaucracy. Participants mentioned that the Inuvialuit communities want to ensure that any regional or strategic process is not “seen as sort of a broad brush pre-approval of projects in the Beaufort, and allowing them to be exempted from the screening process,” but rather providing some environmental clarity over what the carrying capacity is for development. Finally, some participants thought that the federal government was concerned that a regional EA approach would result in diminished federal roles and responsibilities, with one participant stating that “the concern that I thought that I saw coming from [government] was that they didn’t want to see their jurisdictional responsibilities taken away...they are very protective of their responsibilities.”

4.3 Potential Value-added of Regional and Strategic EA to Offshore Oil and Gas Planning and Development

Notwithstanding the diversity of understandings and interpretations of regional and strategic EA, and whether they are interpreted as an integrative or separate and sequential process, several agreed-upon benefits to regional and strategic EA offshore in the Beaufort Sea could be distilled from the interview results. Participants discussed these benefits, or ‘value-add’, of R-SEA to include: identifying data gaps and constructing regional baselines, improving regulatory decision making, better planning for development in the Beaufort Region, greater certainty to stakeholders, managing cumulative effects, improved clarity of the EA process and expectations, improved communication and local involvement, and more meaningful project-based EA.

4.3.1 Identifying data gaps and constructing regional baselines

Overall, participants noted that a more regional and strategic approach to EA could help to identify data gaps and work towards creating a regional baseline. For example, one

federal government participant thought that “we could identify the environmental impacts before hand, identify our information gaps, and start to work to fill some of those, which will ultimately, again, this is for the regulators and managers, assist in making those decisions.” Another government participant agreed, stating that “it could provide clarity to everyone if there is that basic background science for you to base your EA, and planning on.” Inuvialuit boards and agency participants agreed that R-SEA could help with decision making, stating that “you can also get into the more technical aspects, which could be beneficial to the regulators, who need to know that info as well when they are doing their assessments of project applications.”

One industry participant explained that one area of uncertainty in the region concerning development applications is “...have we collected enough baseline data, is it the right data.” Using northern wolf fish as an example, a rare species in the Beaufort Sea, the participant explained that when an EA application is submitted for review somebody will say that not enough data on wolf fish has been collected. “How much data is needed to make a judgment on an environmental assessment - that is one of the questions that we are always faced with.” A more regional EA would have potential to resolve these challenges “because that way, perhaps DFO, whoever else, could come back and say, we believe for the purposes of drilling in the offshore Beaufort that there is sufficient information on benthic fisheries to allow us to make some informed decisions on what the impact of a drilling program could be.”

4.3.2 Improved regulatory decision making

There was general consensus that regional and strategic EA could lead to improved regulatory-based decision making. Industry participants stated that “the regulators, generally, they want to have responsible development, so what they need to know is the environmental background, the risk, how the other stakeholders feel about it, and the confidence that they can stand up and say ‘this is being done right.’” The key message was that regional and strategic EA would allow regulators to conduct more effective planning for offshore oil and gas exploration and development the Beaufort region.

The Inuvialuit agencies tended to agree, with one participant stating that “you would have something to evaluate against: it would help the ones responsible for EA and regional planning better design smart regulations to get the predicted outcome.” Another participant from one of the co-management boards said that regional and strategic EA would allow regulators to say ‘no’, and that “when you have regional multi-party frameworks that are all saying the same things it makes the regulator's job very easy.” The participant explained that “regulators aren't terribly effective when they are isolated - land and water planners in one corner, ...fish in the other corner, ...wildlife over on the center, and they are all making their independent decisions” The result of R-SEA is the ability for governments to identify and support ‘no-development’ zones. As one Inuvialuit co-management board member put it:

“The value added of looking at regional processes is that we are able to determine when we want to save something. Like you could, in its entirety, say we don't want anything to happen to the Husky lakes area of the ISR. We want to make it a ‘no go’ zone for development, for resource extraction and that some resemblance of that cultural and social value can be retained...Regulators want the ability to say no, so they need some type of support.”

4.3.3 Better planning for development in the Beaufort

Closely related to the above, participants recognized a more regional and strategic approach as something that would allow for better development planning in the Beaufort Region. A regional vision and future plan for the study area was seen as a value-add by all groups but the Inuvialuit boards and agencies. For example, one government participant noted that “you have a better chance of looking at the entire environment, so you are not looking at only the footprint of a project, but you’re looking at the greater footprint of multiple projects in a region, such as the Beaufort Sea” (Government, INAC). Another government participant thought that it would help avoid legal challenges, stating that “we can maybe get some hint or evidence that a project is going to lead to a certain pattern of land use development or economic effects, or opportunities, or impacts, and its not federal business” and for the federal government “to actually turn a project down because we think at some point a land use planning process hasn’t been

good enough, will lead to an overturn of our decision because it's not our business" (Government, NEB). On the similar subject of agreements, one government participant thought that R-SEA could "hold people to the consultations that they have had...so that minds couldn't be changed as easily saying, 'this is what was said for the REA, this is what we came up with as a group, this is what we have all agreed to'" (Government, DFO). An industry participant saw it as providing "a better understanding of the regional setting," while an ENGO participant discussed the idea of a vision, stating:

"We believe that properly done means an R-SEA needs to consider future scenarios, and develop alternatives based upon future scenarios, alternatives that then inform current decisions. The benefits are, that you can essentially establish a vision, economic, socio-cultural, and environmental, and you can lay down what your preferred vision for a landscape, or seascape is, and then you can track against that and monitor to see whether you are going where people want to go."

4.3.4 Greater certainty to stakeholders

Almost all participants identified the potential value of regional and strategic EA in providing greater certainty to industry and stakeholders, with one participant stating that industry "would like to know if at some point [the regulators] are going to say no more, and I'm sure they would like to know if that number is...because they won't spend money on something that they don't think they are going to be able to do at the end of the day." Another participant agreed, stating that industry needs to "know that this is what the economic environment and the political and bureaucratic environment is going to be like." When industry moves into the Beaufort Region they need to know, in advance, the obstacles and challenges that they are going to have to deal with in terms of regional plans, data, coordination, and consultation. One ENGO participant noted that R-SEA should manage risk, explaining that the industry typically wants to have an assured supply of a resource, but in order to manage the risk around ensuring that future supply "they need to determine, will we or will we not have the social licence to drill in the offshore in a particular area." Industry added to this list that R-SEA should deliver "tighter timelines, a more focused EA, and a better understanding of the regional setting."

Both industry and government participants commented on what they saw REA and SEA

delivering to industry, which included increased clarity and a reduction of regional issues that would need to be addressed in a project EA. For example, one federal government participant thought that “the proponents would be a lot happier if they had a better idea what’s expected of them” (Government, DFO). Another noted that “proponents perhaps, in particular, are looking for some assurance that if you’ve delisted exploration wells from the comprehensive study list, and [they]...make the investment in an environmental study, ...this isn’t going to get bumped to a full scale panel review at some point in time” (Government, CEAA). Participants from the industry group agreed, and viewed R-SEA as providing such an opportunity to narrow the focus on project-based EA, thereby gaining greater efficiencies. For example, as stated by one participant:

“If you look at what some of the regional approaches could deliver, I don’t think that’s a responsibility that should be downloaded onto proponents. And I don’t think it’s really, you know their responsibility should be to assess the effects of their project. I think that’s necessary...and a relevant and practical thing to ask them to do. But when you’re asking them to make broader judgments about significance and overall impacts on a region, I don’t think that’s something that you want to download to a proponent or fairly ask them to do.” (Industry, CAPP).

This was echoed by another industry participant who explained that this would provide “value add to a proponent going in afterwards to say...I have to do my environmental mitigation, I have to be smart about what I am working..., but I now know that the issue of concern that I need to be focused on..., and this is where I need to focus my EA.”

4.3.5 Managing cumulative effects

Several participants thought that an R-SEA could help with assessing and mitigating cumulative effects. For example, one government participant noted that an R-SEA “has potential to better evaluate cumulative effects” and “to better evaluate regional effects.” The participant explained that “effects that may be the result of an individual or several projects that aren’t necessarily detected within the footprint of those projects.” If, for example, marine mammals are stressed by development in a particular region and “then go off and have reproductive failure somewhere else, that is an effect that might not be detected in regular follow up from a project but something that might be better handled in a regional EA type of approach” (Government, INAC). Another federal government

participant explained that with the current regulatory system it is challenging to satisfy cumulative effects analysis "...because land use is set by the province or the land claim organizations, and our Act and our legislation requires us to assess a project" (Government, NEB). A participant from industry suggested that under R-SEA "you could consider cumulative effects, or really multiple projects going on at the same time, or same time frame, which I think is certainly... a limitation of the current system" (Industry, CAPP). Another stated that "the cumulative effects starts to fit in, and the regional approach as well, because now you are looking, again at the regions sort of more holistically, and getting a sense of sort of how various pieces interconnect, more so than you would through an individual EA."

4.3.6 Clarity of process and expectations

Participants thought that an R-SEA should be delivering clarity to all stakeholders. For example, one participant explained that R-SEA should provide clarity on whether a particular kind of resource development is appropriate for a given region, so such issues do not have to be repeatedly addressed for every individual action. The participant raised the example of seismic operations, explaining that for every individual seismic project there are people saying "...we don't think there should be oil and gas development in the North; if you have a process that asks people what they think, then they are going to tell you what they think". The participant went on to explain that these sorts of broad issues should be addressed "in a regional one-time thing, and then not have that part of the public engagement on the project level, because the project level is for a different kind of question...regional or strategic EA should deal with that kind of question, clarity on the big questions" (Government, NEB). Another federal participant agreed, stating that "the value added to the industry and communities, and regulators...it could provide clarity to everyone." Participants from the Inuvialuit boards and agencies also raised the potential for R-SEA to bring clarity to stakeholders, noting that "everybody would know the rules, and what is expected." The participant explained the situation as follows:

"Right now, the HTCs are fighting to have wildlife monitors as mandatory, but people are just doing it, industry is doing it out of safety precautions, and stuff like that. But research, always, they don't have the budget to do that, so what

they are trying to work on is trying to get something in place, so say that was on there, everybody knows you need to have that. So then that would benefit everybody because nobody would be fumbling around, saying, oh, you don't need this, oh, you don't need that, kind of flip flopping around. And to deliver it, it would be to everybody, even the people in the town, so that they know, and are aware, clarity to them, to industry, to government, it would be good for everybody” (Inuvialuit Joint Secretariat).

As other members from the Inuvialuit Boards and Agencies commented, “everybody would know the rules, and what is expected” and this would be of benefit to industry because “all they ever want is assurance...if they know what is yes and what it means, and what is no and what it means, they are happy because they have been told no many times but no one can really define it, and in the end it becomes yes.” One member from a Inuvialuit co-management board explained further that “...we really want them to want it because we need it economically to feed our own engines, so the surety is the biggest value we can bring to it” Put another way, from the industry perspective, R-SEA was viewed as providing an opportunity to “remove the redundancy, and also, ideally through doing that, your shortening your timelines for review because you are focusing in on the issues of concern and of relevance.” In the Beaufort Region, this notion of streamlining was “a huge driver behind the support that we [industry] had for the BREX exercise, [it] was about reducing the timelines for the subsequent project EAs.” As one industry participant explained, “it gets less costly in terms of going through the application process; there may be...magnitudes of scale, efficiencies, where you may be able to reduce costs for a better outcome at the end of the day.”

4.3.7 Improved communication and local involvement

One participant from industry thought that a potential value-add from an R-SEA would be earlier consultation with local communities, explaining that the communities would have a better understanding of what is happening and have earlier input to the planning process because “when you get to an application process, as some players point out, you are already behind the 8 ball, somebody already has a plan.” Participants also thought that a more regional and strategic approach to EA in the Beaufort Region should have

certain deliverables to local communities. For example, one participant from a Inuvialuit agency thought that it should demonstrate how an offshore development “would benefit the people that live here, and the environment and the ecosystems that people depend on.” Others from the North saw the communities gaining more communication through R-SEA, with one participant noting that “it comes back to them having access to a voice, to be able to maintain the livelihood that they see fit to maintain.” Another participant agreed, stating that “it can narrow the focus down, it can make consultation with the communities much more focused...and in that sense...would have a lot of benefit to the communities because basically it provides them answers to questions if presented to them in a meaningful way.” Industry expressed the same perspective, stating that “to communities, more information, better understanding on what’s going on, and an earlier input into the planning process” are key local benefits of R-SEA. That said, one government participant noted that the local communities should be responsible for including themselves in the conversation and that “the community level involvement is something that I see as an Inuvialuit responsibility, and it’s up to them to determine how communities are engaged in the development of this plan moving forward...the venue of engagement needs to be through the co-management bodies.”

Interestingly, one Inuvialuit board and agency participant disagreed with the idea of increased consultation and spoke instead of R-SEA as providing better consultation, stating:

“If you can provide that broad scale answer that could be applied to all projects, they [proponents] don’t need to keep repeating the same thing over and over again, which causes a lot of strain on the companies that have to come, but also on the communities, because they have to come in, and answer the same questions over and over and over again. And it’s very frustrating for them, because they have one company coming in and they have to ask a series of questions to apply to their project. Then you have another company coming in and working in a similar area, and they have to ask the same questions again, because a lot of times they don’t want to share data with each other. Its proprietary and they spent the money to collect it. Their small towns and they are being consulted to death on everything. So in that sense you can take some of those broad, especially the ecosystem level questions, and that’s a lot of the things that the communities have concerns about, is those types of issues. And they can basically narrow the focus of the project specific EA to the very specific things for that project area. Because all of those other questions, so the obligatory questions, they are all

answered and dealt with through this larger process.”

A number of federal government participants noted the importance of Traditional Ecological Knowledge (TEK), and suggested that local TEK would be best suited within a more regional EA platform. A participant from industry agreed, noting that TEK might help within sensitive areas identification within the region, especially “if the aim is continuity in terms of time series data to support the management of a region that is of elevated importance, because the reality is I don't think you want this model everywhere.” The participant went on to explain that there may be certain areas where it is easy to delineate, [or] more important to folks for a whole number of reasons, maybe it's a species hot spot in combination with traditional use.”

4.3.8 Meaningful project-based EA

The majority of participants thought that an R-SEA could help to narrow project EAs by addressing common regional issues upfront. For example, a government participant stated that “the driver is an individual project, but can we take a step back from this proposal and see...why is this policy here, what are its merits, what are alternatives.” In the absence of R-SEA, the participant explained that with a single project review “...those kinds of things...would tend to take over everything else...that would be the only thing that would be publically examined [but] questions about oil and ice and effects on mammals, and changing ice conditions and all of those other questions are still out there” (Government, CEAA). One government participant thought that the regional issues would be “taken care of in the R-SEA, and not have to be dealt with in the project EA,” such as cumulative effects and cumulative effects monitoring (Government, INAC). Another participant mentioned that if there are issues around regional processes, or regional scale variables that come up with each and every project, there would be opportunity through R-SEA to “collectively sort of address that almost as a class assessment approach” (Government, CEAA). Industry echoed this idea, with one participant the value added of R-SEA as follows:

“Here's the region, how can we look at this region holistically, rather than on the individual project by project basis, and how can we, I guess sort of provide that

regional framework, the regional understanding, the regional framework that then, project proponents can sort of fill in with their individual project information. So I think if you look at that, certainly the original proposal, a huge driver behind it was eliminating the redundancy in the applications and in the information being collected in terms of...do we need to get the same information on the same area, more or less, six times over, or can we just collect it once for the region and be done with it, and then have individual project proponents supplement as necessary. So I think the regional exercise is more about eliminating some of that redundancy, and just really getting the greatest bang for your buck for the individual project proponents” (Industry, CAPP).

A Inuvialuit board and agency participant agreed, explaining that there are “things that are larger than a project specific, or things that would be relevant for all projects within the Beaufort Sea, ...so you don’t repeat it in the EA processes every time.” The participant further explained that R-SEA could “make it easier for them [industry] through a project specific EA process, because it wasn’t intended to replace them, and in addition it will tackle a number of very regional themes, socio-economic as an example, cumulative impact monitoring, ...or terms and conditions. Another participant from the Inuvialuit Joint Secretariat noted that “the value added is that you don’t have to keep on doing it [project-specific EA and related data collection] over and over again, at least not all of it.”

Another perceived value-added of R-SEA identified by most participants was that it could lead to a more adaptive approach to EA. Off-ramping regional issues from project EA to the more regional and strategic EAs was seen as a benefit, as well as the opportunity to inform project EAs and other land management processes. For example, one government participant stated that “the project EA is going to inform your REA, and ultimately your REA, which is sort of over a longer term, is going to help you make decisions with project specific EA” (Government, DFO). Closely related to this was the issue of monitoring, and the ability through regional approaches to bring project specific information back to the regional database. Participants from industry saw the main benefit from a linked project EA-R-SEA as allowing a focusing of project EA requirements by off-ramping regional concerns to R-SEA. One industry participant stated that “if you are doing your R-SEA right, what you are doing with an EA is you are

asking companies to focus on issues of concern...you are dealing with the repetitive routine stuff up ahead, and ...we know the issues of concern on a regional basis.” That being said, concern was raised by one industry participant that the R-SEA should occur before projects, or the added process may lengthen project EA timelines.

ENGO participants saw clear connections between project EAs and R-SEAs, explaining that “R-SEA provides the regional baseline and context for how EA decisions are actually made” and that “getting the desired future scenario established for an entire region creates the context by which singular EAs would be used to make decisions about whether or not a particular project contributes beneficially to the objectives laid out under that desired future scenario.” Participants from the Inuvialuit boards and agencies similarly identified the opportunity to set the regional context through “a living process” that is both “adaptive and forward thinking.” As one participant explained, for example, “you wouldn’t be able to judge an individual proposal unless you could put it into the perspective of the regional framework.” Another participant from the Inuvialuit Joint Secretariat agreed, stating that a more regional and strategic approach would benefit projects “because it answers some of those broad ecosystem based questions” and, in turn, project-specific EAs could benefit broader regional and strategic frameworks “by providing some of the more detailed info in a more narrow area, ...a sense whether the broad based results are true or not, whether their actually valid.”

4.4 Risks and Perceived ‘Value-lost’ of Regional and Strategic EA to Offshore Oil and Gas Planning and Development

Notwithstanding the perceived benefits, there were concerns, however, that a R-SEA approach could lead to some value lost in the study area. For example, participants raised concerns over potential limitations on development opportunities, the uncertainty of a novel approach, the risk of another regulatory layer, and reduced decision making flexibility.

4.4.1 Foregoing anticipated development opportunities

A concern raised by a few participants was that an R-SEA could limit development in the study area. For example, one federal government participant stated that “a value lost to this, if I were Industry, I might say limit on development.” An industry participant viewed a potential problem if someone tried to use the R-SEA to stop development, stating that “some proponents would have the perception that there is a greater risk to their asset, and the planning of their asset, ...so if you do something new like this and somebody tries to railroad the process, or somebody tries to get in there and use this as a lever to stop development; I think the key is to set some ground rules.” Another industry participant agreed that R-SEA could increase risk to potential business. When considering the future of R-SEA, this participant commented: “How is such an approach going to affect existing rights, or future opportunities...how does that impact us in any way right now?” One ENGO participant identified a similar concern to industry, stating that “the risks to industry would be that if people think about future scenarios and realize the possible trade offs, risks coming from oil spills or accidents, or the implications for conservation, ... some options for Industry could be foreclosed, either on how they drill or where they drill.”

4.4.2 Uncertainties of a novel approach

Some viewed R-SEA as something that could increase uncertainty in the offshore development region. For example, one industry participant noted that “one of the downsides is the unknown with these R-SEAs; nobody, with the exception of Norway, no one has pulled these things off where everybody benefited in the way that they think they should.” Another participant, a federal regulator, echoed this sentiment, stating that “with the uncertainty, yes, I think there could be [value lost] depending on the way you do it, ...and if that question around how we are supposed to apply it isn’t clear then it could be of limited value.” This participant went on to explain that this wouldn’t necessarily mean “...a total loss, because there would be that background science that we could use to help us base our decisions on, but the clarity that some might seek wouldn’t

be there.” A participant from one of the Inuvialuit agencies expressed that it’s “that hesitancy of not wanting to know what the real answer is because it could impact, and doing things on a project by project basis, you never really get to that.”

Another uncertainty raised concerned the issue of scoping. One federal government participant commented that when deciding on boundaries, there is concern over where you decide to draw the lines. This participant raised land fast coastal ice versus offshore open water, or land fast coastal ice and the shoreline, as examples. A participant from one of the Inuvialuit boards agreed, stating that “a lot of people are worried about lines on maps, and particularly government departments, because that’s where their jurisdiction begins or ends, and it does get into this other stuff of terrestrial versus offshore.”

Uncertainty over timelines and time commitments was another issue of concern. One industry participant noted that R-SEA and similar types of initiatives do not always line-up with the current project EA timeframes. For example, “one of the reasons they can sometimes be a pain is because we have to work on schedules as a rule, because all of our exploration licences have a timeline; ...a seismic program takes a long time...and to drill a single well will take three seasons, which essentially means three years.” The participant went on to explain that industry has schedules and timelines that it has to meet, and many stakeholders involved argue that regional assessments must be done before companies go forward with applications. In the current context of the Beaufort Region the questions become will government “stop the clock on our exploration licences?” the response is often “oh no, we [government] can’t do that, you [industry] have to continue with our schedule, but we are going to spend the next five years doing an REA...and we [industry] say, well you have just used up five of our years.”

An unrelated timing issue, raised by a participant from the Inuvialuit Joint Secretariat, concerned the four year government cycle and the uncertainty this poses to planning long term. The participant explained that “every three or four years there is a whole new bunch in charge and they don’t really care what happens 15 years down the line, they’re not going to be in power then.” The uncertainty issues raised was that under such

conditions the notion of “putting together something that’s going to be a 20-25 year plan is like they can say anything they want, quite frankly.”

The final issue raised concerning uncertainty of a novel approach was the issue of tangible benefits. One federal government participant saw issues with accountability as potentially reducing the real benefits of R-SEA, stating that “maybe you get some accountability, but maybe, because of the government culture, or bureaucratic culture, the results are not influential.” One ENGO participant identified the potential loss of focus of important goals and values as a potential challenge with advancing R-SEA, explaining that “often times, with such planning exercises, there is a variety of stakeholders and they all have different interests, and some are interested in economics, or environmental, or cultural.” The participant went on to explain that “often times we want the landscape, or the ocean in this case, to do everything for us, and we don’t want to lose anything, and so with any EA plan, end plan, there needs to be some prioritizing of what values are more important than others, and setting of limits.” In this context, concern was raised by a participant from one of the Inuvialuit co-management boards as to whether the R-SEA approach would benefit the local communities, noting that “it may very well be a risk, because they have, this region has been through a boom bust cycle twice now, ...there are expectations, if they are not met, then of course there will be an impact...probably a negative one.”

4.4.3 Adding another layer of bureaucracy with little benefit

There was also some concern raised that R-SEA could become another layer of bureaucracy that stakeholders would have to engage in the study area, but with no real benefit. One ENGO participant noted that “if R-SEA is misperceived as just more red tape or bureaucracy, then it’s problematic.” A federal government participant noted similar concern, explaining that the latest initiative in the study area, BREA, may have become another layer in the regulatory process because it came too late; after the leases had been let out. The participant noted that “BREA really was conceived at a time when two large exploration licences had already been issued in the deep water environment, so

there was no strategic question, the decision had already been made.” Another participant from industry echoed this sentiment, noting that “one might say that hindsight is a great thing, maybe that kind of a strategic assessment should have been done 35 years ago, but in my mind, as far as an SEA is concerned, I think the horse has already bolted from the barn on that one.”

4.4.4 Loss of flexibility in decision making

Finally, some participants raised concerns that stakeholders would be locked into a plan, foreclosing new opportunities that might emerge in the region. For example, a participant from the Inuvialuit Joint Secretariat noted that there is always going to be the issue of the loss of flexibility for decision making “because as soon as you put in something like a strategy, or you put in some sort of over-arching mechanism its going to be hard to circumvent it; there are always going to be issues that come up that are beyond our imagination, 'we didn't see that one coming'.” The participant continued, stating that “I don't think Aboriginal people themselves feel comfortable locked into anything - even the community conservation plans, they are just that, they are not binding to anything...they don't like being locked into anything.” Another Inuvialuit board participant explained that “there's a little bit of hesitancy and unwillingness to do long term planning initiatives that tend to set quotas or set things in stone for development because when you do that, for example, this organization then feels that their power has been taken away from them.”

4.5 Opportunities and Challenges to Advancing a more Regional and Strategic EA in the Beaufort Region

In order to move a regional and strategic EA approach forward in the study area, certain issues need to be addressed. The following sections report on a number of issues extracted from the interviews that represent both opportunities and challenges to advancing R-SEA in the Beaufort region. These include leadership, coordination of

interests, financial resources, legislated versus voluntary approaches, capacity, and ‘other’ challenges.

4.5.1 Leadership

Participants were asked what the primary role of governments, industry, and Inuvialuit boards and agencies would be in advancing R-SEA in the Beaufort Sea, as well as who should lead. Participants were divided on the details, but the answer with the most support was that the federal government should be the lead agency with an array of suggestions for support. One ENGO participant explained why the federal government is a good choice for a lead agency, explaining that “with the devolution of EA...this arguably is the area where the feds should become more involved...because of the potential for R-SEA to address trans-boundary cumulative effects, there is a reason for, because of its broader geographical scale...for the feds to be the leaders on this.” As far as suggestions for support, all participants, with the exception of industry, suggested that the Inuvialuit boards and agencies should be a strong supporter to the federal government lead. One federal government participant explained that the Inuvialuit “are the people who are most likely to be affected by development, their engagement I think needs to be in making sure the right issues are being looked at, because they are on the ground, ...feeling the affects of development, so its important that they be at the table” (Government, INAC).

Another common view was that there should be co-management support, including the Inuvialuit boards and agencies, with industry input. This was the view held by the majority of industry participants, with one stating that it should be a “multi-disciplinary thing, I think the government was going to take the leadership perspective on it, but the other two primary stakeholders, the Inuvialuit and industry, need to have a big say in the scope.” However, some participants, particularly from the Inuvialuit boards and agencies, disagreed, with one participant stating that they “didn’t know if industry should be involved too much, because the government are regulators and Aboriginal people are users of the land, and so I think they should be the decision makers. A

participant from the federal government agreed, stating that the lead agency “has to respect the governance of the region, which is Inuvialuit plus Canada.”

Other suggestions for leadership, but with less support, included a steering board with support from the government; government and Inuvialuit sharing the lead; and a completely co-management led process. Some participants separated ‘REA’ and ‘SEA’ to discuss leadership responsibilities, with one federal government participant noting that, with an SEA, the lead agency should be strictly government “because we know who makes the policy decision.”. An industry participant agreed that “SEAs should be led by government agencies or authorities that actually make policy decisions”, and that REA should be led by regulators “like the NEB, Transport Canada, DFO, Environment Canada, and INAC to some extent.”

As participants discussed leadership for R-SEA, there were also challenges raised. For example, one ENGO participant raised a policy concern, stating that R-SEA “needs to have some accountability, so I would like to see that...it be connected to the government coming out with a policy statement on environment management in that region.” One federal participant was concerned about R-SEA turning into an umbrella statement, noting that “you run the risk, with these regional exercises, I think that they end up in motherhood statements, which isn’t going to help anybody either...our main goal is sustainable development...but what does that mean, operationally in the ISR?” Another federal participant thought that the biggest barrier facing the advancement of R-SEA was for the lack of a project management approach, where “...you’ve identified all the knowledge gaps and the issues that need to be addressed, and then you need to put money at it...and then have a project manager overseeing it from beginning to end...having the money to hire the experts because people in the region don’t have the time.” Still, others were unsure as to whether there was strong enough leadership to effectively run an R-SEA initiative; otherwise “the risk is, you invest in this, and the results, the output is not viewed as being adequate” (Government, INAC).

4.5.2 Coordination of interests

A second, and closely related, challenge was the perceived lack of willingness to coordinate, or a lack of coordination in respect to more regional and strategic EA approaches in the study area. The majority of participants from all four groups spoke to this challenge, with one federal participant stating that “the biggest challenge is the continued coordination...just maintaining that momentum is always a challenge, because the reality is the project specific EAs come quick and fast, and they are upon you, and you get involved in doing those one offs, so its maintaining the momentum to carry through with these sort of longer, more detailed processes.” Another federal participant, drawing upon past experience from BREA initiatives, noted that “sometimes you get three people at a meeting, and it’s their voice, and really, when you are doing the REA, it needs to be really clear what it means to the community and what it means to the future decision making process.” An industry participant spoke to coordination challenges within the various stakeholder groups, noting that “the problem is that so many people and organizations have different views as to what constitutes these types of REAs and SEAs that I don’t know if you would ever get agreement.” A participant from one of the Inuvialuit co-management boards saw it more simply, stating that “it’s the integration of people’s activities” that is most challenging (Inuvialuit boards and Agency, FJMC); yet another participant thought that “institutional change” was the real challenge, particularly in terms of “the multitude of government agencies that you would have to draw together” to make R-SEA a success.

4.5.3 Financial resources

The majority of participants from all groups identified funding as the greatest challenge to advancing a system of R-SEA in the Beaufort Sea. For example, one federal government participant said that “it could be extremely costly, especially in that area, being so remote and so harsh.” Similarly, another participant, from industry, explained that “if we do it right, the cost will come back and benefit everybody, but upfront, yes, somebody has to pay.”

The lack of funding commitment on behalf of the federal government was identified by all participants as a major constraint. One federal participant noted that the federal government may “fund the planning part, but they don’t fund the implementation side.” Another government participant, however, explained that the financial challenge had more to do with timing and capacity, stating that “when we are in a boom, because we are in a boom bust economy here, then all this work needs to be done, but really, the financial resources should almost be flipped to when there’s a low time, the financial resources should come into the community for things like an REA.” (Government, DFO). An industry participant agreed that finances are a challenge, noting that “given what just happened with BREA, there’s not the financial resource right now; that just depends on what the priority is, and right now it seems that it’s not.” A member of one of the Inuvialuit co-management boards echoed this frustration, noting “we just experienced it with BREA - it was a great proposal, it had a lot of work put into it, there was buy-in from industry and government departments that had been working on it,...they developed a good proposal and brought it up to the high level feds, and they said thanks but no thanks.”

Almost all participants thought that the federal government that should be primarily responsible for financing R-SEA. As one government participant explained, a “cost recovery model doesn’t make sense at a strategic level, so that means government has to pay for it.” An industry participant agreed, stating that “certainly on the SEA you want to see the government holding the purse strings, because they are the ones who are the resource manager, the land owner.” A participant from one of the Inuvialuit Boards further added that “the feds are the ones with money, and they are the ones who will get the royalty money, so they are the ones that should make most of the investment.”

Others, however, suggested that a cost recovery model was optimal in that under this model industry could support the federal government to finance regional and strategic initiatives. These participants suggested that although the federal government should be responsible for initial financing, industry should provide significant support. As one

federal government participant explained it should be “mostly the responsibility of government just to facilitate the costs associated with developing the initiative.” A participant from industry agreed, stating that “we think the government should pay upfront, make it all publically available to everybody, but we are prepared to pay a user-pay system.” The participant went on to explain that it is “government’s responsibility to understand what’s going on regionally to see if development, how development should proceed, but if developers start using that information the government should recoup their money because the public paid for it.” A participant from the Inuvialuit Regional Corporation noted that industry already helps fund research in the study area, and “it helps to build a more sophisticated picture of what the processes are in the environment that you want to manage.”

No participants suggested that the Inuvialuit boards and agencies should be responsible for funding regional and strategic EA initiatives. One participant from the Inuvialuit Joint Secretariat noted that the Inuvialuit boards and agencies should not have to assist with funding such initiatives, because “obviously it has to be a shared financial responsibility, between government and industry.” But, as explained by one federal participant, “we have got this cabaret of people around the table, that love to engage in the philosophical discussions in the high level goal, but as soon as they broach the subject of implementation plans, everybody looks at their shoes. Who’s going to cough up the resources; who is actually going to do the work?”

4.5.4 Legislated versus voluntary approaches

Participants were asked if the results of an R-SEA should be enforceable or voluntary in terms of directing development. There was an almost even distribution between ‘voluntary’, ‘legislated’, and ‘too early to tell’. Inuvialuit boards and agencies were the largest supporters of the voluntary approach, with few participants from government agreeing, and none from the industry and ENGOS.

Some participants from the Inuvialuit boards and agencies raised concerns over the legislation process, noting that, for example, "...legislating things can often times reduce your flexibility to do what maybe will work rather than what you think will work; I think it probably could be done voluntarily, because done the right way I think all players could see the benefit of this work being done...and it would be in their best interest to participate and contribute". Many other Inuvialuit participants echoed this sentiment, with one noting that "centrally driven policy initiatives I think are a thing of the past." One federal participant noted that people are inclined to point the finger at the Canadian Environmental Assessment Agency for regulation, saying "you have to codify this regional approach in legislation, and we pushed back and said no -it's a responsible authority's, a decision maker's responsibility to understand and assume an appropriate level of risk, and an objective body like CEAA that administers a process is not in position to manage that risk for you."

The majority of industry and ENGOs, many government participants, and the minority of Inuvialuit agency participants supported a legislated approach. One federal participant noted that there is already concern in the study area regarding the lack of ability to demonstrate regulatory efficiency. Industry agreed, with one participant noting that the lack of regulation and regulatory efficiency on many issues creates a very unstable regulatory system, and that "there is no putting anything to rest...you never get to say, ok, we have dealt with that, it's always, lets continue to deal with that, and lets add new issues onto the table, and so, I see the legislated base, hopefully gives you some way to start addressing some of those concerns." As such, some participants thought that a tighter legislated approach could help with this challenge, with one industry participant noting that "if you do an R-SEA, because it's not an actual application, it doesn't have any actual legislated mandate, and something comes out at the other end, some kind of a conclusion, or a report, or recommendations or whatever, ...what do you do with it?"

One government participant noted that "to get that certainty that people desire, I think that we need to have it enforceable", with an industry participant similarly stating that "there needs to be a much tighter legislative base for R-SEA, right now, and that's how

you start mitigating that risk. This participant went on to explain:

“You need to see commitments from various regulators [because] ...as the legislative situation stands right now it would just be a huge role of the dice for any company to go in and say, you know what, X, Y, and Z in my application are not there because I am relying on the information gathered from this REA. And the regulator might say, I don’t recognize that, I want to see that information, you could see a challenge from the communities, you could see that challenge coming the NGO community, saying your application is incomplete, you haven’t addressed these issues. And what is your legal base for recognizing, essentially a third party product, does that satisfy your legislative requirements?”

Another industry participant agreed, stating that “you would want the results enforceable in some way [because] if you leave things voluntary, you can leave things in the grey [and] I would be worried that your just creating more ambiguity...I don’t know that in the Beaufort, in the North in general, that more ambiguity is what’s needed.” An ENGO participant also agreed, noting that R-SEA “has to have really clear policy connections from government as to what their accountability is, and how they are going to implement the plan, and that’s one of the risks I see with the approach in the Beaufort.” Few participants from the Inuvialuit boards and agencies favoured legislation. Those that did were of the view that “in order for all the industrial companies to go ahead with a plan like that it has to be legislated; you can’t have one or two oil companies not working with this group, so if its legislated they’re going to have no choice.”

All other participants either thought it was too early to tell or that a combination of both would be possible. Those participants who thought it was too early to tell noted that they would be hesitant to legislate any process that hadn’t proven its value add to project EA. For example, one government participant noted that “you would have to be pretty careful with [legislating R-SEA], because it’s likely to be wrong, because it is regional and strategic, it’s likely to be correct only in generalities.” Some participants thought a combination of voluntary and legislated models could be used, with one industry participant noting that “there may come a point when you move that from voluntary to something else, so a lot of it is not one thing all the time, its one thing at a point in time.” The participant explained that it’s really “about being mindful of what rolling from a no-development, no-pre-planning scenario looks like, to one where it is fully managed, some degree of pre-planning, you know where your real environmental vulnerabilities are and

how to manage around them, and then through policy you signal what that needs to look like.” One participant, from the government of the Northwest Territories, agreed, stating that “there probably could be both, depending on what is set up, but it would definitely not be all legislation because its hard to change regulation and legislation or laws once they have been put in, and this has to be a living document where it changes with the times and conditions and the people.”

4.5.5 Capacity

The final issue concerns capacity, specifically human resources, monitoring, data and data sharing arrangements, as well as understandings of what R-SEA is and what it should deliver. All groups raised human resources as a concern, with most agreeing that capacity may exist outside of the study area, but not wholly within it. For example, one industry participant noted that “there certainly exists the capacity already with consultants and those kind of things, supported by people from the North, but like I said it wouldn’t be able to be run completely from the north.” A Inuvialuit board and agency member agreed, stating that “we, the Inuvialuit, don’t necessarily have the human capacity to do a bang up job, I think we could do it if we had to, but more people would always be better.” An ENGO participant also mentioned that human capacity in the study area to undertake R-SEA was questionable, stating that “we are already overtaxed in the NWT in terms of the number of commitments for land use planning, and land and water management, so whatever comes has to be a realistic plan, it can’t be the biggest and largest assessment ever done.” One federal government participant raised concern over sustaining capacity, noting that “there is capacity to develop a lot of the issue around a regional and strategic EA, but again, not the human resource capacity to implement and sustain it.” Finally, one federal government participant noted the human capacity challenges within government as a major concern, noting that “we have one scientist in Yellowknife...there is an issue in terms of capacity and understanding, the North and the northern processes, a lot of it can really create trouble for us up here because we’re [DFO] the ones having DFO scientists come up and we don’t even know they are here.”

Monitoring was the next largest capacity concern, noted by all groups. One Inuvialuit board and agency participant indicated that “there is a need for research, there needs to be more planning, and of course monitoring, and it surrounds all of our indicators.” One participant from government stated that “if a REA is to be implemented, there would need to be an approach to regional monitoring [and] I think the capacity to develop ...the regional monitoring exists, the capacity to implement it is limited, and the capacity to sustain it is non-existent.” Industry tended to agree, with one participant explaining that “ideally you set up your monitoring program to be able to inform and improve your assessment to make sure that you are looking at the right factors”, but the capacity to undertake this sort of monitoring currently does not exist. Interestingly, one federal participant suggested that industry should be doing the monitoring, that “we don’t have the capacity...and, also, they usually get to choose what type of monitoring they do, we have a lot say, but...there is other monitoring we need to do as well.”

Data were identified as presenting another constraint, but only the government and industry groups commented on this. Some participants saw challenges with data synthesis and availability, while others noted proprietary challenges. For example, one government participant noted that “if you talk to any scientist who does work in the Beaufort, they will say there is not enough information; if you talk to someone who oversees work in the Beaufort, of the number of scientists, they will say there is more data on the Beaufort than there is anywhere else in the world, or in the Arctic...so, I suspect it’s somewhere in between.” However, this same participant went on to note that “there are still some critical gaps, and those critical gaps pertain mostly to the fact that Industry is moving into the deeper offshore, and focus has been on the near shore environment in the Beaufort.” Industry also saw data synthesis as a challenge, commenting that “the first thing you need to do is actually some sort of an assessment as far as what do we know or not.” The same participant raised other challenges as well, noting that “it’s either proprietary in the sense that they’ve paid for its collection and so if other people are going to be using it, they want to be reimbursed in some capacity, or...people are generally uncomfortable releasing their data; you need to find a way to

facilitate the data sharing and make things more transparent.” A participant from the Inuvialuit Regional Corporation also identified a lack of data synthesis as a challenge to advancing R-SEA in the study area, noting that “nobody has taken it all and integrated, I don’t think there is a circulation model of the Beaufort Sea, maybe there is, but that is just an example of how disaggregated the data is.”

The final capacity challenge, and the dominant theme underpinning this entire research, was the lack of understanding of what R-SEA is and what it should deliver. For example, one government participant noted that “no one knows what REA or SEA is, there is no common definition, there is no common legislated requirement for it, there is no certainty as to the benefits that it might bring, there is a lot of theory out there, but there has not been a lot of practical examples.” Industry also perceived this lack of understanding, with one participant stating that “there are all types of things it could deliver, and I think that’s where some of the current confusion lies, is that people look at something, like the BREA, and everyone had very different ideas of what that should involve and there was no sort of tight definition, which was one of our challenges early on.” As a participant from one of the Inuvialuit boards and agencies summed-up: “If you asked me to define SEA, I wouldn’t be sure of what it was.”

CHAPTER 5

CONCLUSION

5.0 Introduction

There are constant and consistent messages from government, industry, science and academia concerning the need to advance EA towards a more regional scale, and to the earliest stages of development decision-making processes (e.g., CCME 2009; Jenkins, 2008; BSSrPA, 2007; Noble, 2002; Thérivel et al., 1992). Applied primarily within the context of the federal Cabinet Directive (Dalal-Clayton and Sadler, 2005), SEA has been falling short of its many promises. In response, the Canadian Council of Ministers of Environment recently endorsed R-SEA, thus providing a means for strategic-based assessment to be extended past the Cabinet Directive and a framework to facilitate more regional-based EA and planning initiatives at the strategic level of decision-making. Understanding of what R-SEA is and what it should deliver in Canada's ISR, however, is still far from consolidated (Noble, 2009; Vicente and Partidário, 2006; von Seht, 1999).

The Canadian Arctic, and in particular Canada's Beaufort Sea, is at the threshold of major energy development. As energy companies embark on exploration in the region, and into Canada's high Arctic in future years, there is both a need and an opportunity to develop and implement a system of R-SEA to facilitate regionally-based assessment of development initiatives at the strategic tier of planning before irreversible development actions are taken. The purpose of this research was intended to examine the potential roles of and opportunities for R-SEA in the planning and assessment of Arctic energy initiatives. Stakeholder knowledge of, and expectations about, strategic and regional EA were examined, as well as the perceived opportunities for and barriers to a system of R-SEA for Arctic oil and gas exploration and development. The research was focused on the Beaufort Sea in Canada's Arctic region, the ISR, under the laws and regulations of the governments of the Canada and the IFA. This chapter summarizes the primary research findings, and identifies future research needs and opportunities.

5.1 Efficacy of EA in the ISR

The dominant theme that emerged concerning ‘what’s working’ with regard to current EA in the Beaufort Sea, identified by nearly half of the study participants, was consultation and engagement. This suggests that the settled land claims in the ISR appear to be working effectively with regards to Inuvialuit participation in impact assessment processes. Participants noted that there is considerable consultation occurring between industry and the Inuvialuit, and that the current regulatory system provides good protection for the Inuvialuit. Others noted strong engagement between industry and regulators, particularly the NEB. This is a good indicator that when more regional and strategic initiatives begin to advance, the consultation and engagement foundations have been established, thus, and in keeping with the intended benefits of R-SEA, allowing for a regional vision to be established based on stakeholder engagement and collaborative processes. That being said, there were those participants who identified few, if any, positive characteristics of the current EA system. This is likely a reflection of the frustration of those particular stakeholders during the more recent exploration initiatives in the ISR, and may help explain, in part, why recently more regional and strategic EA initiatives have been high on the agenda.

There were, however, many challenges raised concerning the current regulatory system in the ISR. These included challenges specific to the practice of EA, such as a lack of data, a lack of data synthesis and reliability, the lack of a regional approach, an inability to effectively address cumulative effects, and concern over dated policies and legislation. Another was uncertainty and efficiency, related in part to the multiple players involved, evidence as to whether EAs actually work anymore, volatile economic environments, and issues with time frames related development and decision making processes. Other challenges raised included duplication and coordination issues with the overlapping IFA and CEAA processes, as well as human and financial capacity issues.

These challenges speak both to the limitations of EA, and to expectations that participants were placing on EA that the process was never likely designed to deliver. Many, if not

all of these challenges, however, could potentially be addressed with the introduction of a more regional and strategic approach to EA in the ISR. Results suggest that government, industry and the local communities are in agreement that there is a need for an approach like R-SEA in the ISR.

There was no consensus on whether these challenges mentioned above were unique to the offshore region. About half of the participants identified the challenges as something that both onshore and offshore development are facing, stating that the settled land claims in the ISR actually might make the offshore region easier to navigate than the onshore areas. The other half of the participants saw these challenges as unique to the offshore environment, noting specific challenges like the complex regulatory system, the lack of development thus far, and technical challenges like drilling in deep water, ice, the lack of data, and the high costs of offshore development.

5.2 Knowledge of R-SEA

Though there is agreement on the need of a more regional and strategic approach to EA in the ISR, there was no consensus amongst participants as to the nature and scope of REA, SEA, and R-SEA and what each is intended to deliver. Two schools of thought emerged when participants were asked to describe the fundamental purpose and advantages to a more regional and strategic approach. The first group, comprising slightly more than half of the participants, and consisting of mainly participants from the Inuvialuit boards and agency group, viewed regional and strategic EA as ‘the same thing’ - or R-SEA. The fundamental purpose and advantages identified for R-SEA included increasing certainty or clarity of the regulatory system in the Beaufort Sea, identifying data gaps, establishing a regional database, developing a regional vision and a future plan for the offshore region, addressing regional issues so that project EA can be more focused, potentially establishing ‘no-development’ zones, contributing to adaptive management and finally, facilitating increased consultation and better engagement.

The second group, consisting of mainly the government and industry participants, identified regional and strategic EA as separate processes, or ‘REA’ and ‘SEA’. These participants saw the fundamental purpose and advantages of SEA to be dealing with policy decisions (e.g. spill regulations, same season relief wells, best practices, standards and regulations, rights issuance), providing scope for REA baseline data collection, increasing certainty for industry, facilitating earlier consultation, and helping off-ramp the large issues from project EAs to a more regional platform. Many of these participants also mentioned the Cabinet Directive when discussing SEA, suggesting that they saw SEA as more of a higher-level EA process, but only within at federal level. The fundamental purpose and advantages of REA, as described by this second group of participants, included that it should provide an ongoing monitoring system, involve the collection of a regional database, as well as provide a regional vision and a plan for the future. As discussed in chapter two, there really is no ‘formal’ REA, and many people refer to it in many different ways. In truth, REA is not really an environmental ‘assessment’ so much as it is a regional study, or data collection on a regional scale. Others who refer to REA with strategic purposes were often speaking to the principles of more strategic processes, such as SEA or R-SEA.

Though it would appear on the surface that the above two groups are looking for two different processes, suggesting that there is little consensus, there is actually considerable overlap in terms of the expectations, mandates, and deliverables of regional and strategic EA, regardless of disagreement over the ‘REA,’ ‘SEA,’ and ‘R-SEA’ terminology (see Table 5). The first group, those who viewed REA and SEA as ‘the same thing’, or R-SEA, identified the same traits as raised by the second group who separated R-SEA into REA and SEA. This would suggest that both groups are actually looking for a process that delivers a number of fundamental outputs, but are describing these deliverables using different terminology. As noted in chapter two, one of the challenges with advancing a more regional and strategic approach is getting involved stakeholders to come to a common understanding and as seen here, the terminology continues to be a constraint. Terminology, however, is not significant enough hindrance to discount implementing R-SEA in the ISR. Though, a standardized terminology would be beneficial to help

advance R-SEA initiatives. Terminology aside, results indicate that stakeholders in the ISR do agree with the fundamental principles of R-SEA and are seeking similar benefits.

Table 5: Participants views of REA, SEA and R-SEA.

Fundamental Purpose and Advantages	Group 2		Group 1
	REA	SEA	R-SEA
Should address policy decisions		X	X
Develop a regional vision and future plan	X	X	X
Identify data gaps		X	X
Establish a regional database	X		X
Regional long-term monitoring	X		X
Addresses regional issues to focus project EA		X	X
Establish protected areas or ‘no-development’ zones		X	X
Contribute to adaptive management	X		X
Facilitate increased consultation and better engagement		X	X
Increase certainty and give clarity to regulatory system		X	X

Participants were asked to discuss how they perceived other participant’s views of a more regional and strategic process. Most acknowledged that there is little agreement and a lack of understanding. For example, participants from the government group identified varying opinions on what a regional and strategic EA was, thought that industry was looking for certainty, and observed that many Inuvialuit did not even know what it was. Participants from industry perceived confusion within the federal government, thought that ENGOs were “all over the board,” and generally saw that everyone is seeing the process differently right now. Inuvialuit board and agency participants agreed that no one is coming at this process in the same way. They saw industry concerned with certainty, and government concerned about losing some of their responsibilities, and generally being hesitant to take it on. Given the common goals and expectations identified above, many of these perceptions may not be reality and stakeholders in the region would benefit from an open dialogue on R-SEA, if not a common ‘white paper’ detailing its principles and characteristics.

5.3 Potential Benefits and Risks

Notwithstanding the differences in terminology, a number of common benefits or expectations were identified by participants. Participants thought that an R-SEA could help identifying data gaps and construct a regional database. Another perceived benefit was improved regulatory decision making, such as having enough information for regulators to make more informed decisions, as well as the possibility of establishing ‘no-development’ zones. Better planning for development in general was also seen as a benefit, adding the ability to establish a regional vision and future plan, allowing a look at the whole region when making EA decisions, finding patterns that help predict development capacity levels, as well as holding stakeholders to decisions made.

Stakeholders themselves were perceived to receive greater certainty, such as managing risk, identifying challenges ahead of time so that the regulatory and political environment is well understood, and ensuring tighter timelines for project reviews and approvals. A benefit that SEA has yet to effectively address that stakeholders thought R-SEA would address was more effective management of cumulative effects. Participants also saw R-SEA as clarifying the regulatory process and expectations, such as what type of development is appropriate for a region, as well as dealing with regional policy issues that project-based EA should not be addressing. Many also perceived improved communication and local involvement as an added benefit, with earlier and more focused consultation, as well as incorporating traditional ecological knowledge into the process.

Finally, participants raised the perceived benefit of more meaningful project-based EA, discussing the idea of ‘off-ramping’ regional issues onto an R-SEA so that project-based EA could focus on more specific details, as well as reducing cost, and allowing EA and R-SEA to be a cyclical adaptive process. Most of these perceived benefits match up nicely to the intended benefits R-SEA is supposed to deliver, as discussed earlier in Chapter two. This is further evidence that even though participants were using different terminology there exists a common set of principles.

At the same time, there were several perceived risks to R-SEA that were identified by participants. Some saw the movement towards a more regional or strategic EA process as something that would mean potentially foregoing anticipated development opportunities. Arguably, this is not specifically dealing with environmental risks *per se*; in fact, it may be what is needed of R-SEA in order to protect some of the more sensitive areas of the Beaufort Sea. Some were also concerned that R-SEA would interfere with current EA time frames, potentially disrupting current development proposals. Another perceived risk was the upfront cost of R-SEA. However, many participants noted that after the Gulf of Mexico oil spill in 2010 the government was much more willing to fund such initiatives. Another potential risk identified by participant was the concern that R-SEA is a new approach, and there are no examples of one being done. Participants stated that the benefits needed to be clearly outlined before they would view it as uncertain process, and that there might be issues with scoping the boundaries of an R-SEA initiative. Some participants were concerned that R-SEA could just add another layer of bureaucracy, stating that many leases are already out in the ISR and these regional assessments might already be too late. Finally, some participants saw a potential risk of reducing the flexibility of decision making. For example, if stakeholders are potentially locked into a plan it reduces flexibility as well as reduces the chance for adjustments and adaptive management.

It is important to recognize participant's concerns regarding the potential move toward a more regional and strategic EA process in the Beaufort region. If stakeholders in the ISR do not recognize benefits from such a process, it might not be worthwhile to continue down this path. It will be important to draw upon lessons and experiences with R-SEA and R-SEA-like applications elsewhere, either internationally in the offshore environment or nationally in the terrestrial environment, to more clearly identify and demonstrate the deliverables of R-SEA.

5.4 Opportunities and Challenges to Moving Forward

In order to move forward and advance R-SEA in the Beaufort region, there are a number of issues that need to be addressed including leadership, coordination of interests, financial resources, legislated versus voluntary approaches, and capacity. Many of these issues are not unique to R-SEA or to the Beaufort, but are important to when attempting to implement a more regional and strategic form of planning and assessment in general.

Participants were asked to discuss who they thought would be a good lead agency for R-SEA initiatives, and the response with the most support was that the federal government should take this position. The idea behind this was that the federal government is the best organization set up to deal with trans-boundary cumulative effects, as well as to implement policy or legislation and enforcement. All groups but industry noted that the Inuvialuit boards and agencies should be a strong support to the federal government, allowing decisions to reflect the local communities' regional vision. Some participants, however, thought that there should be no lead agency, and more of a co-management structure established. This idea, however, was criticized by others who said that R-SEA will need strong leadership to achieve its intended benefits. Some participants also stated that industry should not be in the lead group for an R-SEA because it is the Inuvialuit and Federal government that should be making decisions for the region. One possible means forward is that R-SEA policy decisions are by the federal government and the local communities, and regulators lead the database collection, monitoring, and cumulative effects assessments with the input or collaboration of industry through project-specific actions.

Coordination of interests was another major challenge identified. For example, getting involved stakeholders to agree upon what R-SEA is and what it should deliver will need to be addressed before any benefits to this new approach will be realized. The perceived lack of willingness to coordinate by the government and industry groups was another challenge. Technically, SEA is a requirement for the federal government, as outlined in the Cabinet Directive, and, as such, is already supposed to be occurring. But convincing

the federal government should not be difficult when one considers all of the benefits they themselves would receive. First, conducting an R-SEA would be in accordance with the federally supported Arctic mandate to protect the fragile environment in the ISR. And second, an R-SEA would improve the efficiency of project based EAs to the point that it would reduce the costs, shorten the time lines, and in general, produce better EAs. Concerns over R-SEA “setting things in stone” and government and industry not wanting to “know the outcomes” was something that was identified as a constraint to advancing R-SEA. However, as innovative tool with the intention to protect the environment from un-mitigated development, these may just be issues that stakeholders in the area need to adjust to if offshore development is to proceed sustainably.

Financial resources were another challenge raised by participants, which was evident after the BREA initiative was turned down this previous year. After the Gulf of Mexico spill in 2010 however, the federal government changed its mind and decided to fund BREA, which suggests that financial resources are available when an initiative is deemed politically important. As one ENGO participant put it, “we just need to sell the idea better”. In this regard, most participants thought that the federal government should be supplying finances for R-SEA initiatives, with support from industry, who could contribute on a cost recovery model. None of the participants thought that the Inuvialuit boards and agencies should bear the costs of R-SEA.

Participants were divided evenly into three groups on legislated versus voluntary-based R-SEA: some thought it should be voluntary; some thought it should be legislated; and others simply thought it was too early to tell. Those in support of a voluntary approach were primarily participants from Inuvialuit boards and agencies, and saw legislation as something that would reduce flexibility in the regulatory system. Industry, ENGOs and some federal government participants disagreed, and thought that a legislated approach would produce greater certainty, be enforceable, less ambiguous, and provide a measure to mitigate risk. The third group, consisting mainly of government, thought it was too early to decide which approach would work best, and that R-SEA needs to prove its value before it’s legislated. It was suggested that a combination of voluntary and legislated

approaches would be most effective, starting in a more voluntary way, and slowly building a legislated backing. This may be the most viable option, such that stakeholders could see the benefits and eventually, after proving its effectiveness, R-SEA could become a part of the legally required steps in environmental assessment in Canada.

Finally, capacity was identified as a challenge to advancing of R-SEA in the ISR. Amongst the primary concerns were limited human and financial resources, a lack of data, as well as a lack of data synthesis and regional monitoring area capacity. These are issues that need to be addressed before R-SEA process can be effectively implemented, in order to ensure their success and long-term viability.

5.5 Conclusion

Major energy development is looming in the Inuvialuit Settlement Region in Canada's Arctic, but there is currently no form of regional or strategic EA to help plan for future energy development, to establish a long-term regional vision, or to assess and effectively manage the potential cumulative effects of energy development initiatives. The recently federal-funded BREA initiative does show some promise in this regard, at least in terms of establishing a regional environmental baseline, and can be seen as a first step in moving the ISR towards a more regional and strategic approach to EA, and ensuring that involved stakeholders see a benefit in doing so. However, there remains both the need and the opportunity to advance beyond current initiatives for regional baseline data collection and monitoring to implement R-SEA prior to major planning and development decisions being made. This requires that what R-SEA is and what it should deliver are agreed upon by those stakeholders involved.

Notwithstanding emerging BREA initiatives, and though consultation and engagement may be working within the current regulatory system, the challenges are enough that change needs to happen for effective environmental protection as large scale energy development looms in the Beaufort Sea. Though participants do not agree on R-SEA

terminology, this research suggests that there is an identifiable common need for R-SEA in the ISR region, and an emerging common set of expectations in terms of its deliverables. There is also a need to develop the local intellectual capacity, specifically in the areas of science and environmental management, in the Beaufort in order to advance R-SEA. Future research is needed to address the perceived risks and challenges raised by participants for R-SEA to be a worthwhile and effective process.

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APPENDIX A

INTERVIEW SCHEDULE

THEME 1: Perceptions of the current state of practice of EA and regulatory approach to offshore oil and gas in the Beaufort region

- A. What is working regarding the current approach to EA and regulation for offshore oil and gas in the Beaufort region?
- B. What would you identify as the main challenges or constraints to the current system/approach?

Listen to response, then probe to see if there are any additional issues (e.g. overlap and duplication of efforts; redundancy amongst project EAs; complexity of the process; data or technical issues; other?)

- C. Are there issues or challenges that are unique to offshore activities?

THEME 2: Knowledge of regional and strategic EA

- A. Do you see any advantages to a more regional or strategic approach to EA in the Beaufort Sea?
- B. What, in your view, should such a process be delivering? For example:
 - a. What is the fundamental purpose?
 - b. What should it deliver and to whom?
 - c. What is the potential value-added (to industry, communities, regulators, etc)?
 - d. Is there a value lost? (greater risk, uncertainty, costly?)
 - e. How would it (or should it) differ from the current approach?
- C. How do you see REA/SEA linking up with, or informing other types of planning and regulatory systems/frameworks?
 - a. For example, value added/lost to project-based EA?
 - b. How might EA feed into or help support REA/SEA?
- D. Do you think other groups/stakeholders perceive REA/SEA the same as you/your company does?

THEME 3: Requirements to advance a more REA/SEA approach

- A. IF a system of regional/strategic EA were to advance in the Beaufort Sea:
 - a. Who should play what roles? What would be the primary role of governments, industry, Inuvialuit boards/agencies?
 - i. Who would lead?
 - ii. How should it be financed?
 - b. How should it be managed? In other words, should R-SEA be regulated?
 - i. Should the results be enforceable or voluntary in terms of directing development?
- B. Is there currently the capacity to develop, implement, and sustain a system of regional and strategic EA in the Beaufort Sea?
 - a. Human resources
 - b. Financial resources
 - c. What sorts of data or knowledge are needed to make R-SEA work?
 - d. Data sharing arrangements
 - e. Monitoring programs
 - f. Other issues about capacity

THEME 4: Barriers/Challenges

- A. What do you perceive to be the most significant challenges/barriers to advancing REA/SEA in the Beaufort?
 - a. Are any of these challenges unique to the offshore environment?

THEME 5: Lessons learned/Benefits emerging

- A. BREA wasn't funded this fiscal year, but looking back on the discussion to date, what would you identify as the key lessons learned?