



Nunavut Impact Review Board
Final Report for the
**Strategic Environmental Assessment
in Baffin Bay and Davis Strait**
NIRB File No. 17SN034



Volume 1: SEA Summary Report

July 2019

INSIDE COVER PAGE



The Nunavut Impact Review Board has conducted this assessment under the authority of Article 12, Section 12.2.4 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and in accordance with the Board’s Primary Objectives set out in Article 12, Section 12.2.5 of the *Nunavut Agreement* and the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 23 as set out below:

12.2.5

In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of residents of Canada outside the Nunavut Settlement Area.

- 23(1) The Board must exercise its powers and perform its duties and functions in accordance with the following primary objectives:
- (a) to protect and promote the existing and future well-being of the residents and communities of the designated area; and
 - (b) to protect the ecosystemic integrity of the designated area.
- 23(2) In exercising its powers or performing its duties and functions in accordance with the objective set out in paragraph (1)(a), the Board must take into account the well-being of residents of Canada outside the designated area.

Contact Information:

Nunavut Impact Review Board
PO Box 1360
29 Mitik Street
Cambridge Bay, NU X0B 0C0
Telephone: (867) 983-4600
Facsimile: (867) 983-2594

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SIGNATURE PAGE



Photo 1: Board Members (left to right): Guy Alikut, Catherine Emrick, Philip (Omingmakyok) Kadlun, Kaviq Kaluraq, Elizabeth Copland, Allen Maghagak, Henry Ohokannoak, Uriash Puqiqnak, and Madeleine Qumuatuq.

THIS REPORT IS SUBMITTED TO THE HONOURABLE CAROLYN BENNETT, MINISTER OF CROWN-INDIGENOUS RELATIONS AND NORTHERN AFFAIRS BY THE NUNAVUT IMPACT REVIEW BOARD ON THIS 31ST DAY OF JULY 2019.

	
Kaviq Kaluraq, Acting Chairperson	Philip (Omingmakyok) Kadlun, Board Member
	
Guy Alikut, Board Member	Henry Ohokannoak, Board Member
	
Allen Maghagak, Board Member	Madeleine Qumuatuq, Board Member
	
Catherine Emrick, Board Member	Uriash Puqiqnak, Board Member

FOREWORD

The Nunavut Impact Review Board (NIRB or Board) is an independent Institution of Public Government created by the *Nunavut Agreement* that has extensive experience performing impact assessments throughout the Nunavut Settlement Area. The Strategic Environmental Assessment of the potential for oil and gas development in Baffin Bay and Davis Strait (the SEA) was coordinated by the NIRB following a referral by the Minister of Northern Affairs in February 2017 through to the Final Public Meeting in March 2019 and issuance of this Final SEA Report in July 2019.

Currently there is a moratorium or ban on oil and gas exploration in the waters of the Canadian Arctic. This moratorium was put in place for five (5) years by the Government of Canada in December 2016. In 2021 the Government of Canada will revisit this decision. The findings and recommendations of the NIRB resulting from the SEA will contribute a Nunavut-based perspective to be considered by the Government when making this decision. The Board believes that these findings and recommendations will also be useful for informing other policy and planning initiatives for Nunavut and the Canadian Arctic moving forward.

The purpose of the SEA was to better understand the possible types of oil and gas related activities that could be proposed in Baffin Bay and Davis Strait and the potential risks, benefits, and management strategies related to these activities. The Final SEA Report describes the hypothetical development scenarios that were examined to better understand what these activities could look like, identify gaps in available information, address questions and gauge public concern, and lead to recommendations for moving forward. Summaries are provided of the comprehensive review of available literature and the extensive public engagement that was undertaken throughout this assessment, as well as the outcomes of the analysis of potential effects of possible oil and gas activities. Importantly, the report also includes extensive references to the background documentation and the knowledge and Inuit Qaujimagatuaqangit that informed and enriched the SEA, leading to the Board's central conclusion and 79 recommendations for moving forward, set out in summary form in Chapter 1 and discussed in detail in the balance of the report.

The SEA was truly a collaborative effort that would not have been possible without the significant and ongoing contributions of the NIRB, Nunavut Tunngavik Incorporated, the Qikiqtani Inuit Association, the Government of Nunavut, Crown-Indigenous Relations and Northern Affairs Canada (collectively 'the SEA Working Group'), Nunami Stantec, intervenors, and the many community members from the 10 interested communities of Grise Fiord, Resolute, Arctic Bay, Pond Inlet, Clyde River, Qikiqtarjuaq, Pangnirtung, Iqaluit, Cape Dorset, and Kimmirut. Although at times this has been a challenging process for all concerned, the NIRB is confident that the lessons learned in this assessment establish an important foundation for future strategic assessments in Nunavut and the Canadian Arctic and for other types of development.

In particular, the Board recognizes that this assessment has made significant progress with the respect for and treatment of Inuit knowledge and experience, and the NIRB applauds the significant efforts of the Qikiqtani Inuit Association to coordinate the collection of input from communities and advise on its appropriate treatment. The Board thanks all who gave so generously

of their time, knowledge, experiences, stories, and perspectives; while the NIRB acknowledges that many participants faced time, capacity, and financial limits that affected their ability to fully engage in the SEA process, the Board is grateful for the contributions and sacrifices made by all who chose to participate.

The Board Members of the NIRB would like to thank the NIRB's staff for their professionalism and hard work over the past 2+ years to bring the SEA to completion. In particular, the Board recognizes that the SEA benefited significantly from the dedication and commitment of Heather Rasmussen, the Board's guiding hand throughout. Thank you, Heather for the countless hours you have dedicated to leading this work and ensuring that the Board heard a diverse range of perspectives and voices to support our decision-making for the SEA.

Sincerely,

A handwritten signature in blue ink that reads "M. Kaviq Kaluraq". The signature is written in a cursive, flowing style.

Kaviq Kaluraq
Acting Chairperson
Nunavut Impact Review Board

AVANT-PROPOS DE LA PRÉSIDENTE

La Commission du Nunavut chargée de l'examen des répercussions (la CNER ou la Commission) est un organisme gouvernemental public et indépendant créé en vertu de l'*Accord du Nunavut*. Elle possède une vaste expérience en matière d'évaluation environnementale dans la région du Nunavut. L'évaluation environnementale stratégique (l'EES) des possibilités d'exploitation pétrolière et gazière dans la baie de Baffin et le détroit de Davis a été coordonnée par la CNER à la suite d'une recommandation du ministre des Affaires du Nord. Le processus a été amorcé en février 2017 et s'est terminé avec la dernière assemblée publique ayant eu lieu en mars 2019 et la publication du rapport définitif de l'EES en juillet 2019.

En ce moment, il y a un moratoire ou une interdiction d'exploration pétrolière et gazière dans les eaux de l'Arctique canadien. Ce moratoire a été imposé par le gouvernement du Canada en décembre 2016 pour une période de cinq (5) ans. Cette décision fera l'objet d'une révision par le gouvernement du Canada en 2021. Grâce aux observations et aux recommandations de la CNER découlant de l'EES, le gouvernement pourra prendre cette décision à la lumière de la perspective du Nunavut. Selon la Commission, ces observations et recommandations serviront également à éclairer d'autres initiatives de planification et politiques futures concernant le Nunavut et l'Arctique canadien.

L'EES avait pour but de mieux comprendre les types d'activités pétrolières et gazières pouvant être proposés pour la baie de Baffin et le détroit de Davis, de même que les retombées, les stratégies de gestion et les risques éventuels se rapportant à ces activités. Le rapport définitif de l'EES présente les scénarios d'exploitation hypothétiques qui ont été examinés dans le but de mieux comprendre à quoi ces activités pourraient ressembler, de déterminer les lacunes qui existent sur le plan de l'information, de répondre aux questions du public et de mesurer ses inquiétudes, puis d'aboutir à des recommandations. L'analyse approfondie de la documentation disponible et les résultats de la mobilisation du public à grande échelle qui ont eu lieu dans le cadre de cette évaluation, de même que les résultats de l'analyse des effets potentiels des activités pétrolières et gazières possibles, sont résumés dans le rapport. Fait important, le rapport comprend également de nombreuses références à la documentation de base utilisée de même qu'aux connaissances et aux Inuit Qaujimajatuqangit qui ont éclairé et enrichi l'EES et permis d'aboutir à la conclusion centrale de la Commission ainsi qu'aux 79 recommandations, celles-ci étant résumées au chapitre 1 et abordées en détail dans le reste du rapport.

L'EES est le fruit d'un effort collectif qui n'aurait pu se concrétiser sans l'apport considérable et constant de la CNER, de Nunavut Tunngavik Incorporated, de la Qikiqtani Inuit Association, du gouvernement du Nunavut, de Relations Couronne-Autochtones et Affaires du Nord Canada (collectivement le « groupe de travail de l'EES »), de Nunami Stantec, de divers intervenants et de nombreux membres des dix collectivités concernées, soit Grise Fiord, Resolute Bay, Arctic Bay, Pond Inlet, Clyde River, Qikiqtarjuaq, Pangnirtung, Iqaluit, Cape Dorset et Kimmirut. Bien que le processus se soit avéré difficile pour toutes les personnes concernées par moments, la CNER estime que les leçons apprises dans le cadre de cette évaluation serviront de fondement important aux évaluations stratégiques susceptibles d'être menées à bien au Nunavut et dans l'Arctique canadien pour d'autres types de projets d'exploitation à l'avenir.

Par ailleurs, la Commission est d'avis que cette évaluation a permis de réaliser d'importants progrès sur le plan du respect et du traitement des connaissances et des expériences des Inuit. La CNER tient à souligner les efforts remarquables déployés par la Qikiqtani Inuit Association en matière de coordination de collecte de données auprès des collectivités ainsi que de conseils pour le traitement adéquat des données. La Commission tient à remercier toutes les personnes et tous les organismes qui ont généreusement fait don de leur temps, de leurs connaissances, de leurs expériences, de leurs histoires et de leurs perspectives. La CNER sait que de nombreux participants ont fait face à des contraintes sur le plan du temps, des capacités et des finances, contraintes qui les ont empêchés de se vouer entièrement au processus de l'EES. Néanmoins, elle est reconnaissante pour les contributions et les sacrifices faits par toutes les personnes qui ont prêté main-forte.

Les membres du conseil d'administration de la CNER remercient le personnel de la CNER pour son professionnalisme et son dur labeur au cours des deux dernières années et plus dans le but de mener l'EES à bien. En particulier, la Commission reconnaît que l'EES a considérablement bénéficié du dévouement et de l'engagement d'Heather Rasmussen, qui a su bien guider la Commission pendant toute la durée de l'évaluation. Heather, nous vous remercions pour les heures innombrables que vous avez consacrées à la direction de cette tâche et pour avoir permis à la Commission d'être à l'écoute d'un éventail de perspectives et d'opinions venant étayer les décisions prises dans le cadre de l'EES.

Cordialement,

A handwritten signature in blue ink that reads "M. Kaviq Kaluraq". The signature is written in a cursive style with a large, looping 'g' at the end.

Kaviq Kaluraq
Présidente intérimaire
Commission du Nunavut chargée de l'examen des répercussions

KEY TERMS

For the purposes of the NIRB's SEA Final Report, the Board uses the following key terms in accordance with the definitions that follow:

Ballast Water	water carried in special tanks in a ship to improve stability and balance of the vessel.
Bathymetry	the study of water depth: the distance of the seabed from the water surface.
Benthic flora and fauna	plants and animals on the seabed.
Bilge Water	wastewater that collects inside the hull of a ship.
Blowout Preventer	large piece of equipment that sits on top of the well with a valve that can be closed to prevent an uncontrolled release of oil or gas.
Climate Change	changes to weather conditions and climate that may be caused by human activities.
Cumulative Impacts	combined environmental impacts from past, present, and future projects and activities in an area.
Delineation Drilling	used to determine whether an oil or gas resource (reservoir) is there and how deep it is.
Effect	a change to a valued component of the environment from an activity.
Exploration Drilling	used to determine how wide the oil or gas resource (reservoir) is.
Fouling	accumulation of oil on equipment such as fishing gear of vessels.
Fracture gradient	the amount of pressure needed to generate fractures in a rock at a given depth.
Gas Hydrate	a solid ice-like form of water that contains gas inside its cavities. The gas is mostly methane and can form in pipelines and pose problems, so a substance is used to slow down or prevent gas-hydrates from forming.
Global Warming	the warming of the Earth from the release of greenhouse gases, such as carbon dioxide, into the air from human activities.
Greenhouse Gas	a gas that contributes to the warming of the Earth, for example, carbon dioxide.
Hydrocarbon	oil and/or gas.
Iceberg	a large piece of freshwater ice that has broken off a glacier and is floating freely in open water.
Impact	negative or positive influence from an activity and the environment.
Invasive Species	animals and plants that are not naturally found in the area and have been brought from somewhere else.

Inuit Qaujimajatuqangit	a morality that is the base for Inuit existence. It is the belief system at the core of Inuit identity and governs Inuit society.
Inuit Qaujimaningit	what Inuit know and a collective knowledge that is more recent in nature. It can be related to Inuit Qaujimajatuqangit that has evolved or changed in recent times.
Mitigation	a plan or an action taken to avoid or reduce a negative effect.
Oil and Gas Field	a location in the seabed where oil and gas quantities are large enough to support oil and gas production.
Plankton	small (microscopic) plants and animals living in marine water; are a source of food for other animals (for example, fish).
Polynya	open water surrounded by ice.
Pore pressure	the pressure of fluids within the pores of a reservoir.
Reservoir	a subsurface pool of oil or gas resource.
Sediment	a layer of sand particles on the seabed.
Seismic Activity	earthquakes and resulting tsunamis.
Seismic Survey	the use of sound generating devices to assist in locating oil and gas fields in the seabed.
Transboundary Effects	environmental impacts that can spread across other territories, provinces, or countries.
Turbot	commonly used in the communities to refer to Greenland halibut.
Wareship	anchored vessel for offshore storage to: carry fuel, drilling materials and other supplies; store and ship waste products; provide maintenance and repair operations, and support helicopter, well control, and oil spill response operations
Wellbore	hole drilled in explore and recover oil and gas resources.
Worst-case scenario	refers to the worst possible type of accident with the most negative effects that could potentially occur associated with a development, used for planning and preparing for required responses and prevention

ACRONYMS AND ABBREVIATIONS

ACRONYM DEFINITION

AFA	Arctic Fishery Alliance LP	HTA	Hunters and Trappers Association
AMAP	Arctic Monitoring and Assessment Programme	HTO	Hunters and Trappers Organization
BF	Baffin Fisheries	IBA	Important Bird Areas
BOP	Blowout preventer	INAC	Indigenous and Northern Affairs Canada
CAAQS	Canadian Ambient Air Quality Standards	IPCC	Intergovernmental Panel for Climate Change
CAPP	Canadian Association of Petroleum Producers	IUCN	International Union for the Conservation of Nature
CCG	Canadian Coast Guard	km	Kilometre
CDD	Commercial Discovery Declaration	LNG	Liquefied Natural Gas
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada	M	Magnitude (Richter scale)
CNG	Compressed Natural Gas	m	Metre
COGOA	Canada Oil and Gas Operations Act	MBS	Migratory Bird Sanctuary
CPRA	Canada Petroleum Resources Act	NADF	Non-aqueous drilling fluids
dBa	Decibel	NEB	National Energy Board
DFO	Fisheries and Oceans Canada	NWA	National Wildlife Area
EAMRA	Environment Agency for Mineral Resources Activities	NFA	Nunavut Fisheries Association
EBSA	Ecologically and Biologically Significant Area	NIRB	Nunavut Impact Review Board
ECCC	Environment and Climate Change Canada	NMCA	National Marine Conservation Area
EL	Exploration Licence	NO_x	Nitrogen Oxides
FEED	Front end engineering and development	NRCan	Natural Resources Canada
FLNG	Floating Liquid Natural Gas vessel	NTI	Nunavut Tunngavik Incorporated
FPSO	Floating Production Storage and Offloading vessel	NWA	National Wildlife Area
GHG	Greenhouse gas	NWMB	Nunavut Wildlife Management Board
GN	Government of Nunavut	PC	Parks Canada
Hz	Hertz	PL	Production Licence
		PM_{2.5}	Particulate Matter
		QC	Qikiqtaaluk Corporation
		QIA	Qikiqtani Inuit Association

QWB	Qikiqtaaluk Wildlife Board	USD	United States Dollars
RCP	Representative Concentration Pathways	VEC	Valued Ecosystem Component
SARA	<i>Species at Risk Act</i>	VOC	Volatile Organic Compounds
SBA	Significant Benthic Areas	VSEC	Valued Socio-Economic Component
SDL	Significant Discovery Licence	VSP	Vertical seismic profiling
SEA	Strategic Environmental Assessment	WBDF	Water-based drilling fluids
SSRW	Same Season Relief Well	WWF	World Wildlife Fund
TC	Transport Canada	2D	Two dimensional
TCF	Trillion cubic feet	3D	Three dimensional

REPORT MAP



Volume 1: SEA Summary Report

Foreword
Chapter 1: Summary Report



Volume 2: Background Information

Chapter 2: Introduction and Background
Chapter 3: History of Oil and Gas Activities
Chapter 4: Governance and Lifecycle
Chapter 5: Existing Environment in Baffin Bay and Davis Strait



Volume 3: Analysis of Scenarios, Key Findings and Recommendations

Chapter 6: Possible Development Scenarios in Baffin Bay/Davis Strait
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CHAPTER 1: SUMMARY REPORT

1.1. INTRODUCTION AND BACKGROUND

The Nunavut Impact Review Board's (NIRB or Board) Strategic Environmental Assessment of the potential for oil and gas development¹ in Baffin Bay and Davis Strait (the SEA) was the first assessment of its kind in Nunavut. This Final SEA Report is the result of over two (2) years of collaboration between the NIRB, community members, knowledge holders, Inuit organizations, government agencies, and a wide range of interested parties. The following report summarizes the findings and recommendations of this process as well as the steps taken to reach these conclusions.



¹ For the purpose of the SEA, 'oil and gas development' refers to the discovery and exploitation of oil and gas deposits and encompasses exploration, production, and decommissioning and abandonment activities.

1.1.1 *Purpose of the SEA*

The Federal Government (then Indigenous and Northern Affairs Canada now Crown-Indigenous Relations and Northern Affairs Canada or CIRNAC) referred the SEA to the NIRB in February 2017. The purpose of the SEA is to better understand the possible types of oil and gas related activities that could be proposed in Baffin Bay and Davis Strait and the potential risks, benefits, and management strategies related to these activities. Unlike assessments that focus on proposed projects, there was no proposed project. Instead, the SEA was designed to examine hypothetical development scenarios to better understand what these activities could look like, identify gaps in available information, address questions, and receive comments and concerns from the public to help the NIRB make recommendations for moving forward.

Currently there is a ban on oil and gas exploration in the waters of the Canadian Arctic. This ban, called a moratorium, was put in place by the Federal Government in December 2016 with a commitment to revisit the decision in five (5) years. In 2021, the Federal Government will revisit this decision. The findings and recommendations of the Board for this SEA are intended to contribute a Nunavut-based perspective to be considered by the Government when making this decision.

As part of the SEA referral, the Federal Government requested that the NIRB use Inuit Qaujimajatuqangit collected by the Qikiqtani Inuit Association (QIA) and create opportunities for communities to meaningfully contribute to the assessment. Approaching the SEA grounded in these forms of knowledge has resulted in an assessment that places a heavy emphasis on the engagement of Nunavummiut. As a result, the Inuit Qaujimajatuqangit and Inuit Qaujimaningit shared with the Board has informed both the process undertaken as well as the study itself.



The SEA has been designed to:

- Collect background information regarding conditions in Baffin Bay and Davis Strait (the Area of Focus);
- Describe potential challenges, obstacles, and other factors relevant to possible oil and gas development in the Area of Focus;
- Describe possible oil and gas development scenarios;
- Assess the potential for impacts and benefits associated with oil and gas development if this type of development would be allowed to proceed in the Area of Focus;

- Identify knowledge and data gaps, and areas of concern;
- Facilitate extensive public engagement and participation of Inuit knowledge and rights holders from the Area of Focus;
- Facilitate the gathering and sharing of Inuit Qaujimajatuqangit and Inuit Qaujimaningit; and
- Deliver the Board’s Final Report and recommendations to be considered by the Government of Canada in the review and reconsideration of the December 2016 decision to designate Canadian Arctic waters as off limits to future oil and gas licences (the moratorium).



Parties share information and knowledge with the NIRB

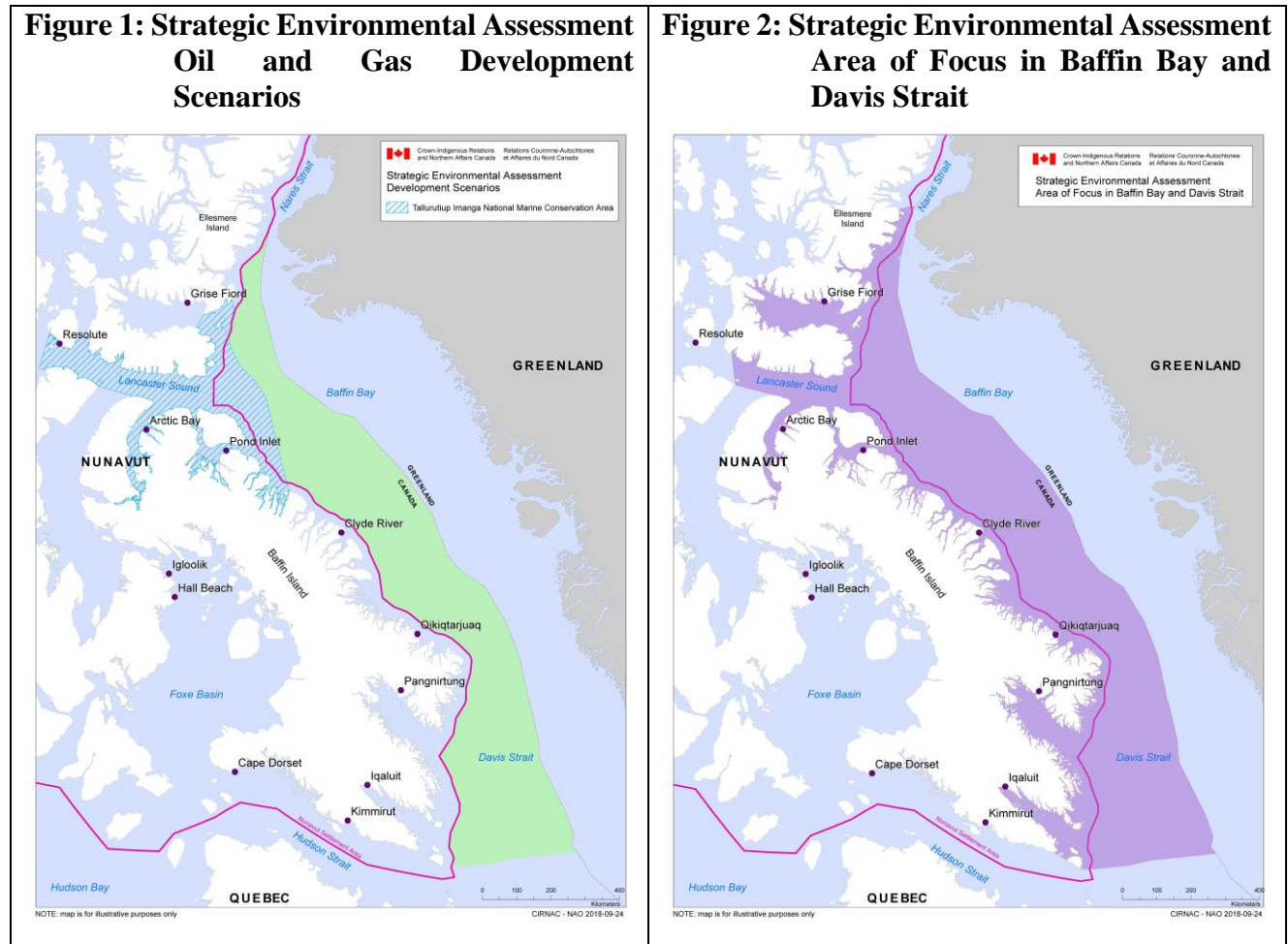


Federal Government considers the NIRB’s findings and recommendations when making decisions regarding possible offshore oil and gas development in the Canadian Arctic

1.1.2 Area of Focus

The SEA focused on two (2) specific marine areas. The area in green identifies the area used by the Board to identify possible oil and gas development scenarios. This area is under the jurisdiction of the Federal Government (Crown-Indigenous Relations and Northern Affairs Canada) but is outside the Nunavut Settlement Area, so it is not governed by the laws of Nunavut or by the *Nunavut Agreement*. The SEA did not consider development scenarios inside Tallurutiup Imanga (Lancaster Sound) National Marine Conservation Area as this area is already off-limits to development regardless of the moratorium.

The area in purple is the greater area used to gather scientific information, Inuit Qaujimaqatugangit, and Inuit Qaujimaningit on the existing physical, biological, and human environments and to assess the potential positive and negative impacts of the oil and gas development scenarios.



1.1.3 *Role of the NIRB*



At the outset of the SEA, Nunavut Tunngavik Incorporated and the Qikiqtani Inuit Association requested that the NIRB be involved, given the Board’s extensive experience leading project-specific assessments in Nunavut. The NIRB is an independent Institution of Public Government created by the *Nunavut Agreement* that has extensive experience performing impact assessments throughout the Territory. It operates “at arm’s length,” meaning it doesn’t report to, or receive influence from, other government institutions. The Board is set up in this way so that it can remain fair and objective.

The NIRB’s position of objectivity is central to meeting its mandate to deliver timely, thorough and objective impact assessments, including the SEA process. The NIRB does not stand to gain from either the promotion of oil and gas activities or the discouragement of these activities. It is not an advocate for oil and gas development, and neither is it an opponent. Instead, the NIRB has approached the SEA as it does with any other form of development: with a focus on its mission to protect and promote the well-being of the Environment and Nunavummiut through its work.

1.1.4 *Process Contributors*

This assessment is the result of significant collaboration. Its success is based on the many important contributions of the members of the SEA Working Group, people from the 10 potentially interested communities, Inuit organizations, Nunavut Institutions of Public Government, federal and territorial agencies, as well as industry, academia, and non-government organizations. The following table provides examples of some of these contributions.



Table 1: Process Contributors for the NIRB's Strategic Environmental Assessment of Baffin Bay and Davis Strait

Process Contributors	Examples of contributions to the SEA process
Nunavut Impact Review Board (NIRB) ◇	Coordinating the assessment and preparing the final report with recommendations.
Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) ◇	Initiating the SEA and coordinating input from federal departments
Nunavut Tunngavik Incorporated (NTI) ◇	Ensuring the SEA process and resulting government decisions reflect Inuit rights and the <i>Nunavut Agreement</i>
Qikiqtani Inuit Association (QIA) ◇	Collecting Inuit Qaujimagatuqangit and Inuit Qaujimagangit and information on Inuit harvesting activities and working with the NIRB to ensure appropriate use and incorporation of Inuit knowledge throughout the process.
Government of Nunavut (GN) *	Providing educational material on general oil and gas activities to the communities
Community members from Clyde River, Arctic Bay, Resolute, Grise Fiord, Pond Inlet, Qikiqtarjuaq, Cape Dorset, Kimmirut, Iqaluit, and Pangnirtung	<ul style="list-style-type: none"> ▪ Providing knowledge and input ▪ Informing the process ▪ Asking questions ▪ Telling us what is important ▪ Attending public meetings ▪ Providing written comments and submissions
Inuit organizations and other groups	
Nunavut Institutions of Public Government	
Federal and Territorial Government Agencies	
Industry, academia, and non-government organizations	

* Working Group was formed with representatives from the NIRB, CIRNAC, NTI, the QIA, and the GN. Working Group members each performed specific roles to support the SEA process and its success is in large part due to the significant time and effort put forward by these organizations.



1.2. SEA PROCESS

The SEA was conducted in three phases:

- Phase 1: Scoping
- Phase 2: Development Scenarios
- Phase 3: Develop Final SEA Report

This Final SEA Report marks the conclusion of the NIRB’s role in the current SEA process. The Report is submitted to the Federal Government to inform its future decision-making processes.

1.2.1 Phase 1: Scoping



Purpose	To identify a list of topics to be considered within the SEA.
Steps Taken	<ul style="list-style-type: none"> ▪ The SEA Working Group visited the 10 potentially interested communities two (2) times and used the feedback received to make the scoping list. ▪ The scoping list was sent out to get feedback from organizations, the public, and governments.
How the public was involved	<ul style="list-style-type: none"> ▪ Participating in public meetings held in the 10 potentially interested communities ▪ Providing written comments to the NIRB
Questions asked	<ul style="list-style-type: none"> ▪ What questions or issues are most important to address? ▪ What concerns do you have about oil and gas development in your region? ▪ What experience do you have with past oil and gas activities? ▪ What do we need to learn more about?

1.2.2 Phase 2: Development Scenarios



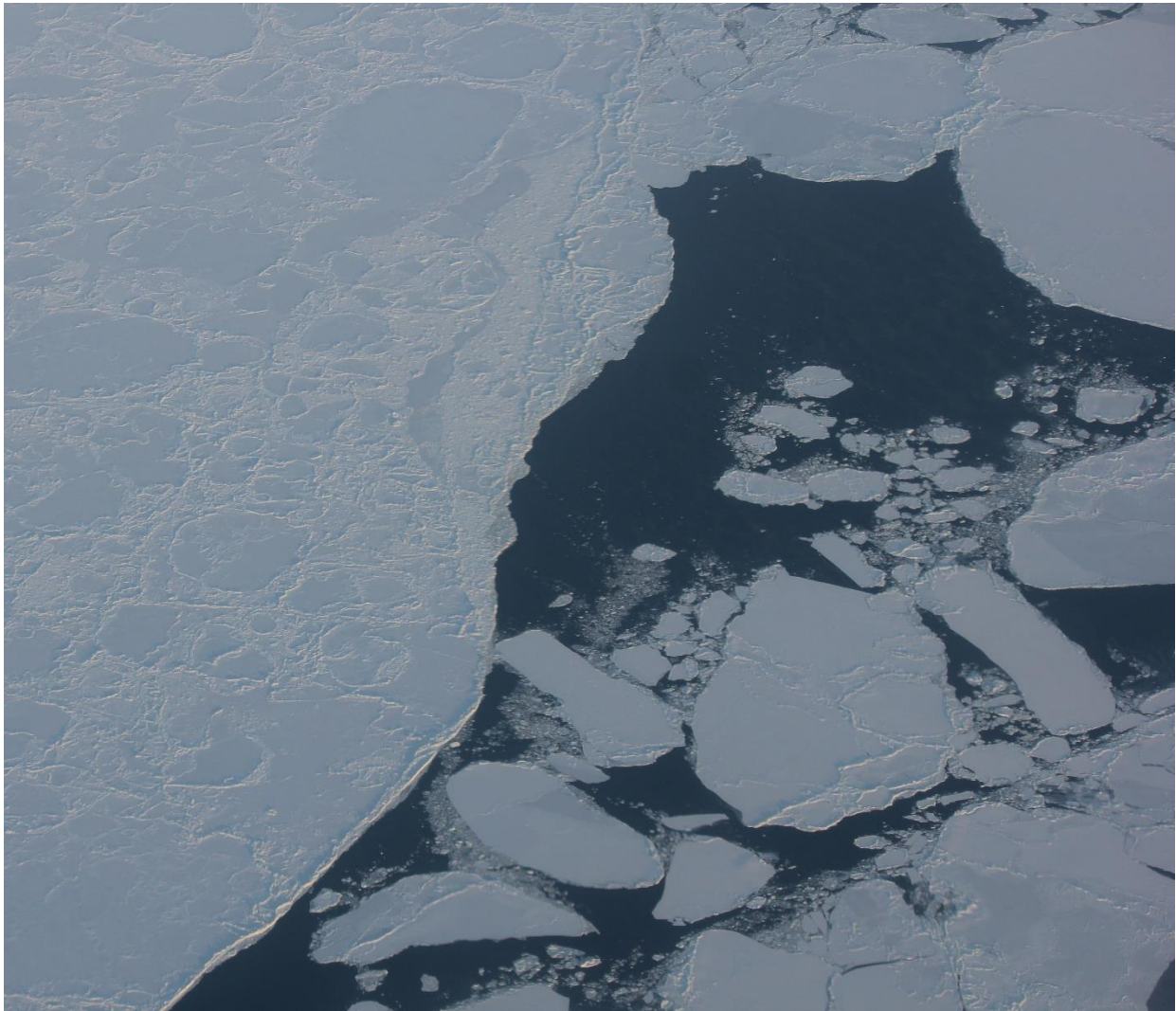
Purpose	To identify what oil and gas development could be possible in Baffin Bay and Davis Strait if this type of development was allowed.
Steps Taken	<ul style="list-style-type: none"> ▪ An independent consultant developed two (2) reports for the NIRB: the <i>Possible Development Scenarios Report</i> and the <i>Environmental Setting and Effects Assessment Report</i>. ▪ The consultant engaged with the oil and gas industry to inform the development of the hypothetical oil and gas scenarios. ▪ These technical reports, as well as a summary report prepared by the NIRB, were distributed to communities, organizations, the public and government for feedback. ▪ The NIRB conducted a community tour to discuss the development scenarios and possible effects and to hear feedback
How the public was involved	<ul style="list-style-type: none"> ▪ Participating in public meetings held in the 10 potentially interested communities ▪ Providing written comments to the NIRB
Questions asked	<ul style="list-style-type: none"> ▪ What kinds of oil and gas activities are possible in Baffin Bay and Davis Strait? ▪ What could oil and gas activities in Baffin Bay and Davis Strait involve? ▪ How could these types of activities impact the environment and communities? ▪ What additional questions should be addressed? ▪ What information is missing?
Scenarios Studied	<ul style="list-style-type: none"> ▪ Scenario 1: Exploration with seismic surveys ▪ Scenario 2: Exploration Drilling ▪ Scenario 3: Field Development and Production Drilling ▪ Scenario 4: No Offshore Oil and Gas Activity
Examples of Effects Considered	<ul style="list-style-type: none"> ▪ Effects on the physical environment, biological environment, and human environment ▪ Potential effects from routine activities ▪ Cumulative effects ▪ Transboundary effects ▪ Accidents and malfunctions ▪ Mitigation measures and planning considerations to prevent or reduce potentially negative effects

1.2.3 Phase 3: Develop Final Report



Purpose	To provide the NIRB Board Members with the information necessary to prepare the Final SEA Report. This report contains the Board Members' recommendations for the Minister of Crown-Indigenous Relations and Northern Affairs Canada regarding the potential for oil and gas development to proceed in Baffin Bay and Davis Strait, based on what the Board have learned throughout the SEA process.
Steps Taken	<ul style="list-style-type: none">▪ The NIRB held a Final Public Meeting in Iqaluit in March 2019▪ Community Representatives from the 10 potentially interested Qikiqtani communities, Inuit organizations and other groups, Nunavut Institutions of Public Government, Federal and Territorial departments, Industry, and non-government organizations attended, and shared their knowledge, views, and concerns with the Board.▪ The Board considered the information collected through the SEA process and developed findings and recommendations.▪ Final SEA Report prepared and released.
How the public was involved	<ul style="list-style-type: none">▪ Community organizations from each of the 10 potentially interested communities selected representatives to attend the Final Public Meeting.▪ The NIRB sent materials for the Community Representatives to prepare for the Final Public Meeting.▪ Members of the public submitted written comments directly to the NIRB.
Questions asked	<ul style="list-style-type: none">▪ What information is missing?▪ What areas require further study?▪ Should oil and gas development be allowed in Baffin Bay and Davis Strait?▪ What should happen next?

The NIRB's submission of the Final SEA Report to the Minister marks the conclusion of the NIRB's involvement in the current SEA process. There are other similar assessments underway in other regions of the Canadian Arctic that will also be considered by the Minister, along with the NIRB's Final SEA Report, to decide whether the moratorium on oil and gas development in the Canadian Arctic should be lifted. The NIRB also hopes that the Board's recommendations will be consulted by parties conducting future research to improve the understanding and regulation of potential impacts and benefits from potential economic development (including potential oil and gas development) in Baffin Bay and Davis Strait.



Nunavut Impact Review Board Strategic Environmental Assessment (SEA) of Baffin Bay and Davis Strait



Figure 3: Process Diagram of the Strategic Environmental Assessment of Baffin Bay and Davis Strait

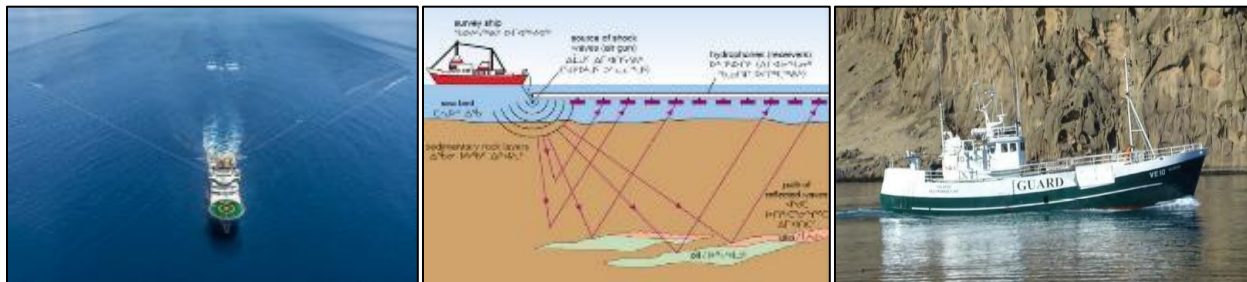
1.3. DEVELOPMENT SCENARIOS

The NIRB hired Nunami Stantec, an independent consultant, to develop possible oil and gas development scenarios in Baffin Bay and Davis Strait. The possible stages, or scenarios, of oil and gas development represent activities, components, and infrastructure that could be used in development throughout the Canadian waters of Baffin Bay and Davis Strait, outside of the Nunavut Settlement Area and the Tallurutiup Imanga (Lancaster Sound) National Marine Conservation Area. The development scenarios are:

- based on current technology at the time of the report;
- not tied to a specific company;
- not predictive of what may happen in the future; and
- not associated with a specific location.

The development scenarios are not project specific and are hypothetical in nature. They represent a best guess, based on current technologies and developments in similar areas, as to how oil and gas development might proceed from initial exploration to commercial production. Consequently, the following oil and gas development scenarios were considered during the SEA:

1.3.1 Scenario A: Exploration with Offshore Seismic Surveys²



Purpose	Identify potential for oil and gas resources by looking at the geology below the seabed
Equipment	1 seismic vessel 1 or 2 ice capable support vessels to provide supplies
Associated Activities	Seismic surveys Two Dimensional (2D) and Three Dimensional (3D)
Timeframe	2-3 years
Potential cost	\$7-18.5 million USD (United States dollars)
Employment and Training Opportunities	<ul style="list-style-type: none"> ▪ 6-10 seasonal positions (marine wildlife observers) ▪ Limited onshore support

² All photos from the Nunami Stantec Oil and Gas Hypothetical Scenarios Report (2018b)

1.3.2 Scenario B: Exploration Drilling



Purpose	Confirm the presence, type, and size of oil and gas resource
Associated Activities	Geotechnical and geohazard surveys, drilling, support vessels, helicopters and aircraft, onshore storage
Timeframe	1 year
Potential cost	\$100-150 million USD
Employment and Training Opportunities	<ul style="list-style-type: none"> ▪ 6-10 seasonal positions (marine wildlife observers) ▪ Possible additional opportunities with if training is provided ▪ Potential indirect employment: local supplies and services

1.3.3 Scenario C: Field Development and Production



Purpose	Extract and process oil and gas to sell
Associated Activities	Geotechnical and geohazard surveys, drilling, storage, transport to export destination
Timeframe	Up to 40 years
Potential cost	\$14 billion USD
Employment and Training Opportunities	<ul style="list-style-type: none"> ▪ 6-10 seasonal positions (marine wildlife observers) ▪ More potential for long term opportunities for skilled and unskilled workers ▪ Possible additional opportunities if training is provided ▪ Potential indirect employment: local supplies and services

1.3.4 *Scenario D: No Offshore Oil and Gas Activity*



If through planning, consultation, and regulatory decision-making processes, it is decided that the Area of Focus is not an appropriate region for oil and gas activities, then oil and gas resources would remain undeveloped and activities associated with the exploration and development of these resources would not occur.

1.3.5 *Accidents and Malfunctions*



Possible accidents and malfunctions were considered for each scenario. These included:

- uncontrolled release of oil and gas
- fire and explosions
- loss of life
- medical evacuations
- downed aircraft
- terrorist threats
- impacts to drilling platforms
- vessel collisions
- major weather and sea
- ice conditions

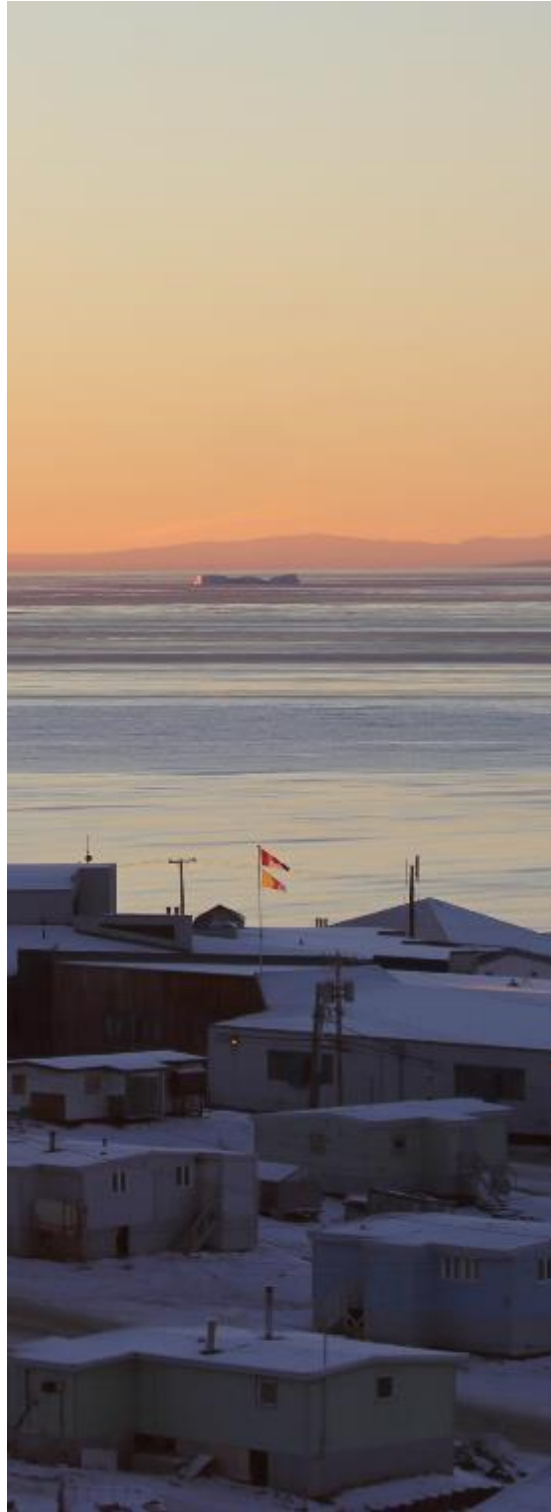
Proponents would be required to evaluate the potential risks of all proposed activities and to have response plans in place for all potential accidents. Effectiveness of response measures for the Area of Focus would depend on multiple factors such as environmental conditions, technology, infrastructure, and capacity. Nunami Stantec recommended that spill response planning consider the variables unique to the region, such as environment, cultural values, local infrastructure, current technology and best practices, and capacity.

A worst-case scenario refers to the worst possible type of accident with the most negative effects that could potentially occur associated with a development, used for planning and preparing for required responses and prevention. Nunami Stantec developed a worst-case scenario for an oil or gas spill from an offshore well and described general response methods.

1.4. VALUED COMPONENTS AND POTENTIAL EFFECTS

To understand the current conditions of the environment and the potential effects from possible oil and gas development, the SEA focused on specific parts of the environment called **valued components**. The NIRB identified these valued components with input from the SEA Working Group, people from the 10 potentially interested communities, Inuit organizations, Nunavut Institutions of Public Government, federal and territorial agencies, as well as industry, academia, and non-governmental organizations. Valued Ecosystem Components are important parts of the natural environment and Valued Socio-Economic Components are important parts of the human environment. The images on pages 16 and 17 show some of the components that were considered during the SEA.

Each of the development scenarios listed in the section above come with a unique set of **potential effects**. Potential effects are possible changes to the human or natural environment caused by a new type of activity. The tables found on pages 18 and 19 outline the potential effects associated with the development scenarios identified by Nunami Stantec. Due to the similarities of the effects of exploration and production drilling, the effects of these scenarios have been expressed in one table.



Valued Ecosystem Components Physical and Biological Environments



Figure 4: Valued Ecosystem Components/Physical and Biological Environments

Valued Socioeconomic Components Human Environment



Figure 5: Valued Socioeconomic Components/Human Environment

Table 2: Highlights of Potential Effects of Seismic Surveys

Highlights of Potential Effects – Seismic Surveys		
Activity	Influence from Activity	Type of Potential Effect
Seismic survey Vessel movement Helicopters	Air emissions	<ul style="list-style-type: none"> ▪ Change in air quality ▪ Change to ice conditions
Seismic survey Vessel movement Icebreaking	Underwater noise	<ul style="list-style-type: none"> ▪ Change to behaviour (avoidance) and habitat use (nesting, feeding) for plankton, benthic flora and fauna, fish, marine mammals, birds ▪ Death or injury of marine plankton, benthic flora and fauna
Vessel traffic Helicopters	In-air noise Artificial Lighting	<ul style="list-style-type: none"> ▪ Change to behaviour (avoidance) and habitat use (nesting, feeding) for birds
Ice breaking	Disturb sea ice and polynyas Lights on vessels	<ul style="list-style-type: none"> ▪ Change in habitat for plankton, birds, marine mammals ▪ Birds attracted to light from vessels ▪ Change to location and success of traditional and commercial harvesting
Seismic surveys Support vessels	Animals and fish change behaviour	<ul style="list-style-type: none"> ▪ Change to location and success of hunting
Seismic survey	Safety/exclusion zone Direct interference Indirect interference	<ul style="list-style-type: none"> ▪ Contact and damage to fishing equipment and other vessels ▪ Change to location and success of traditional and commercial harvesting ▪ Less consumption of country food ▪ Lost time and revenue
Offshore Seismic Surveys (Scenario A)	Employment opportunities	<ul style="list-style-type: none"> ▪ Positive: direct (job) or indirect (more income in the communities) ▪ Negative: short term Inuit employment, few employment opportunities, potential for fewer hunters harvesting country food
Any change to access to marine life and harvesting could negatively affect food security, culture, and transmission of Inuit Qaujimagatqangit.		

Table 3: Highlights of Potential Effects of Exploration and Production Drilling

Highlights of Potential Effects – Exploration and Production Drilling		
Activity	Influence from Activity	Type of Potential Effect
Ice-breaking Vessels Drilling	Underwater noise	<ul style="list-style-type: none"> ▪ Change to behaviour and habitat use (nesting, feeding) for plankton, benthic flora and fauna, marine mammals ▪ Change in behaviour, injury, or death to birds
Drilling	Underwater noise	<ul style="list-style-type: none"> ▪ Change in behaviour, death, or loss of habitat for fish
Drilling Ice-breaking	In-air noise Lighting	<ul style="list-style-type: none"> ▪ Change to behaviour and habitat use (nesting, feeding) for birds ▪ Birds attracted to light from vessels
Vessels	Discharge of liquids	<ul style="list-style-type: none"> ▪ Change of habitat (including special and sensitive areas) for marine plankton, birds, marine mammals ▪ Change to health and habitat to benthic flora and fauna and fish ▪ Introduction of invasive species
Drilling	Waste and mud	<ul style="list-style-type: none"> ▪ Injury or death to benthic flora and fauna ▪ Change to health or habitat to fish
Ice breaking Support vessels	Disturb sea ice and polynyas Lights on vessels	<ul style="list-style-type: none"> ▪ Change of habitat (including special and sensitive areas) for marine plankton, birds, marine mammals ▪ Attraction of birds to lights
Vessel movement Drilling	Changes in animal use of habitat	<ul style="list-style-type: none"> ▪ Change to location and success of hunting
Exploration and production drilling	Safety/exclusion zone Direct interference Indirect interference	<ul style="list-style-type: none"> ▪ Contact and damage to fishing equipment and other vessels ▪ Change to location and success of traditional and commercial harvesting ▪ Less consumption of country food ▪ Lost time and revenue
Exploration drilling	Employment opportunities	<ul style="list-style-type: none"> ▪ Potential Marine Wildlife Observer jobs ▪ Potential employment and business opportunities may be short and unlikely
Production drilling	Employment opportunities	<ul style="list-style-type: none"> ▪ More opportunities for employment opportunities and training
Exploration and Production Drilling	Community Infrastructure	<ul style="list-style-type: none"> ▪ Potential use of local accommodations or airports ▪ Potential use of ports
Any change to access to marine life and harvesting could negatively affect food security, culture, and transmission of Inuit Qaujimagatuqangit.		

1.5. KEY FINDINGS OF THE BOARD



As a result of the SEA process, the Board has provided a set of findings and recommendations. These have been provided to the Federal Government to consider when making decisions about potential oil and gas development in the Area of Focus. These findings and recommendations are based on the information and knowledge that the Board received throughout the SEA process.

The Board used written submissions, input, and knowledge of parties when making its central conclusion of the SEA that:

Given the importance of the marine environment to the well-being of Nunavummiut, significant gaps in knowledge of the environment necessary to support impact assessment, and an overall lack of regulatory, industry and infrastructure readiness in Nunavut, the 2016 moratorium on oil and gas development in the Canadian Arctic should remain in place for Baffin Bay and Davis Strait until such time as the key issues set out in this Report can be addressed. The Board expects that it will take at least a decade to complete the research, planning, and consultation identified as necessary prior to undertaking a re-assessment by the Minister to determine if the moratorium should be lifted.

Five (5) central themes, which are explored in detail in the SEA Final Report, emerged over the course of the SEA and provided the basis for the NIRB's recommendations. These themes are:

- 1. Inuit Qaujimajatuqangit**
- 2. Lack of Readiness**
- 3. Gaps and Uncertainty**
- 4. Marine Planning**
- 5. Alternatives**

1.5.1 *Inuit Qaujimajatuqangit*



Inuit Qaujimajatuqangit, Inuit practices, principles and priorities, and Inuit worldviews were central pillars in this assessment and were uniquely supported through the efforts of the Qikiqtani Inuit Association. The Board heard repeatedly how the marine environment is a source of life for Inuit. The intimate relationship between communities and the marine environment of Baffin Bay and Davis Strait for harvesting, travel, recreation, and culture cannot be overstated. Any decisions made for the region must be properly informed by Inuit Qaujimajatuqangit, Inuit practices, principles and priorities, and Inuit worldviews. The Board recognizes the importance of building on the inclusive approach used for the SEA for reflecting Inuit Qaujimajatuqangit and Inuit Qaujimaningit in future SEAs or project-specific impact assessments for proposed oil and gas development projects in the region, if allowed to proceed. In the Board’s view, these requirements are critical to ensuring that Inuit voices and perspectives continue to be front and centre in future planning and decision-making.

The important work of the Qikiqtani Inuit Association with knowledge holders and the resulting “*Inuit Qaujimajatuqangit Report*” and “*Food Security Report*” contributed significantly to the existing body of knowledge about the area. However, the Board recognizes that this knowledge cannot be understood when separated from its context, and without the ongoing contributions of the knowledge holders who shared their experiences to inform the reports and the SEA. In addition, the Board heard from community members that Inuit Qaujimajatuqangit and Inuit Qaujimaningit is changing very fast due to effects of climate change, cumulative effects, and changes to the way people are interacting with the marine environment and lands surrounding their communities. The Board also heard that there may be limited Inuit Qaujimajatuqangit available regarding the offshore areas, particularly with marine wildlife overwintering habits. The Board understands that much of the existing information about the marine environment is based on experiences in the near shore.

Ensuring that Inuit Qaujimajatuqangit, Inuit Qaujimaningit and Inuit priorities, principles, and world views are central to future strategic and project-specific assessments will require ongoing work to:

- gather information to address significant gaps;
- maintain up to date information; and
- modify regulatory processes and structures so that regulators are better able to understand this information in context and in consultation with knowledge holders.

In this Report, the Board offers recommendations regarding these issues. There is additional work needed to ensure that future participation by Inuit in the regulatory processes associated with development in the region is consistent with Inuit world views, and that Inuit participation in decision-making is not an afterthought.

Key recommendations made by the Board associated with **Inuit Qaujimajatuqangit** address the following:

- Ensuring that future strategic assessments, project-specific processes, baseline research, emergency response planning, and other marine-based planning is structured to involve Inuit knowledge holders and supports the gathering, sharing, and consideration of Inuit Qaujimajatuqangit and Inuit Qaujimaningit. This includes recommendations to establish a participant funding program to provide communities with resources to effectively participate in these processes. There are also recommendations to establish programs to reduce the potential negative impacts from possible oil and gas developments on Inuit culture, heritage, and rights (Recommendations #2, #3, #6, #10 #16, #20, #21, #51, #67, #79)
- Developing an Inuit-led process to establish an accessible central holding place in Nunavut for Inuit Qaujimajatuqangit and Inuit Qaujimaningit studies gathered and shared during these processes (Recommendation #12)
- Providing support for continuing the research started by the Qikiqtani Inuit Association as part of the SEA that studied the role of harvesting in the marine environment. This includes the importance of harvesting to food security, the costs of harvesting, and the importance of country food sharing in communities (Recommendation #67)
- Ensuring that Inuit knowledge holders, Inuit Qaujimajatuqangit and Inuit Qaujimaningit play a meaningful role in the development of programs to avoid or reduce (mitigate) and monitor potential effects (Recommendations #61, #64, #66)

Want to see more?
See Chapter 10 for all of the Board's recommendations or read through the report

1.5.2 *Lack of Readiness*



Governments, regulators, proponents, and communities in Nunavut generally, and surrounding Baffin Bay and Davis Strait specifically, are not ready for oil and gas development. Significant investments are necessary for community infrastructure, for developing the local labour force, and to create capacity for emergency response. Communities clearly expressed their desire to receive increased support and training for emergency response in the marine environment whether there is any future development or not.

Throughout the assessment, the Board heard that there is a lack of readiness for this type of development in Nunavut and in the region on numerous fronts, noting that:

- The local work force in the 10 interested communities have little to no familiarity or training relevant for oil and gas developments and associated service industries;
- There is currently no infrastructure in the region to support any of the types of activities associated with oil and gas development in both the onshore areas, that could serve offshore development, and in the offshore itself;
- There is currently no emergency response capability in Nunavut that could be available to quickly respond to a spill or other type of environmental, health, or safety emergency resulting from the types of activities associated with oil and gas and that could occur either on land or in the marine environment; and
- The Board also heard that none of the 10 interested communities have emergency response training or capabilities to respond to the types of emergencies associated with oil and gas development.

Key recommendations made by the Board associated with **Lack of Readiness** address the following:

- Gathering information on the existing environment (baseline information) and formally reviewing capacity to respond effectively to a major spill or well blowout (Recommendations #19-#46, #31 and #32)
- Establishing a comprehensive Arctic spill prevention, response, and evaluation research program that reflects the unique challenges and demands of the Arctic environment (Recommendation #55)

- Identifying and assessing the capability of existing communication and transportation infrastructure in the Area of Focus (Recommendation #39)
- Improving ice monitoring and management services to increase the accuracy of predictions related to how much sea ice there would be (sea ice extent), iceberg locations and routes, and the potential for extreme weather events. (Recommendation #73)

Want to see more?
See Chapter 10 for all of the Board's recommendations or read through the report

1.5.3 *Gaps and Uncertainties*



The Board heard that a lot more information is needed to fully understand existing environmental and community conditions (baseline) in the region. There is pressing need to gather available Inuit knowledge and additional scientific baseline research to fill these before we can understand the potential for benefits and negative effects associated with potential oil and gas development in Baffin Bay and Davis Strait. As there are important gaps in the existing knowledge of the marine environment in the region and in the potential for impacts associated with oil and gas development, the NIRB has applied a very protective version of the precautionary principle in the development of many of the Board's recommendations. What this means for the SEA is that because the Board has decided that there is not enough information to show that oil and gas development activities would not cause harm to the marine environment, the NIRB has erred on the side of caution and recommended that the moratorium remain in place until the important information gaps identified by the Board can be addressed.

The NIRB also heard that there is currently little interest from oil and gas companies to undertake development in the region. This makes it difficult to determine when potential oil and gas activities could happen, and to know whether in the future companies would even be interested in pursuing oil and gas development in the region. Currently oil and gas activities appear to be at least 30-35 years away, should the moratorium be lifted. Communities also told the Board that the current gaps in general knowledge of the marine environment in Baffin Bay and Davis Strait are limiting marine planning in the region. Given the importance of the marine environment to all communities in the region, the Board has recommended that these general knowledge gaps be filled regardless of whether there are plans for oil and gas development to proceed.

The participants in the SEA identified several specific information gaps:

- little information regarding the current offshore environment (baseline information);
- limited information regarding the potential effects of typical industrial activities associated with oil and gas development on the fish, water birds, and marine mammals in the offshore region. For example, there is little, to no information on the effects of seismic surveys on species such as narwhal;
- uncertainty about the potential for environmental impacts from past, present, and future projects and activities such as increased marine shipping for mining projects in the region to combine with the impacts from future oil and gas development activities to have effects on the marine environment (cumulative effects) such as impacts on Arctic fisheries; and
- a lack of clarity around whether the development of oil and gas resources in the region in the future would be consistent with the Federal Government's international commitments to reduce the release of greenhouse gases under the Paris Accord.

There was also a noted lack of information to indicate that future oil and gas development in the region would provide any significant or long-lasting economic benefits to the 10 interested communities specifically, and Nunavummiut generally. Many communities expressed concern that the highly specialized and self-contained nature of these types of offshore developments might result in limited benefits accruing to those communities in terms of employment, contracting opportunities, or royalties. The Board heard repeatedly that the lack of potential benefits may not outweigh the potential for offshore oil and gas to adversely impact the highly valued marine environment which is central to the well-being of people in the region. To add to the uncertainty of whether there would be economic benefits, the Board also heard that there is currently no interest in the development of the offshore oil and gas resources in the region. It is understood that there are better-known and more easily accessible and economical oil and gas reserves elsewhere in Canada (for example, Newfoundland) and the world. The Board also heard how the world economy is moving away from the use of fossil fuels. This creates considerable uncertainty for if or when oil and gas activities could occur in the region.

The Board has also identified several areas of future research and information requirements that should be addressed during any future SEA or future assessment of a specific oil or gas development project in the region.

Key recommendations by the Board associated with **Gaps and Uncertainties** address the following:

- Conducting research, including gathering and considering Inuit Qaujimajatuqangit and Inuit Qaujimaningit, to establish what the current environmental and socio-economic conditions are in the region (called a baseline). Particular focus was placed on understanding the types of marine fish, water birds and marine mammals in the region, understanding ice and climatic conditions and understanding the human environment, including harvesting, health and well-being, labour and employment and potential benefits and royalties (Recommendations #19, #25, #27, #28, #30, #34, #35, #36, #38, #41)

- Building on the baseline studies recommended above to understand the existing environment, conducting research to assess the potential for oil and gas development to have impacts on the physical, biological, and human environment conditions in the region. Focus is to be placed on how the following could change the region’s marine environment, including fish, water birds and marine mammals, and/or could have impacts on Inuit culture, heritage and rights (Recommendations #33, #45, #53, #54, #56, #57 and #58):
 - noise (especially during seismic exploration),
 - spills and other releases of contaminants,
 - cumulative effects; and
 - climate change
- Developing and assessing the effectiveness of measures to reduce or prevent impacts (mitigation) (Recommendations #61 and #62)
- Update modelling, mapping, and predictions about impacts (#74 and #75)

Want to see more?
 See Chapter 10 for all of the Board’s recommendations or read through the report

1.5.4 *Marine Planning*



There is currently no focused or centralized mechanism to undertake holistic planning in the near shore and offshore marine environment in the region. Planning requirements of the *Nunavut Agreement* administered by the Nunavut Planning Commission throughout the Nunavut Settlement Area do not apply in the majority of Baffin Bay and Davis Strait. Coordinated marine planning could be a central driver of the research and knowledge-gathering activities recommended by the Board. This type of coordination and planning could be used to bring together the related information and studies and to make sure this information is made accessible to communities.

The Board sees the need for a holistic and focused marine-planning effort in the region to:

- identify research priorities;
- identify marine-based conservation areas;
- support the development of national and international transboundary plans and agreements;
- further marine-based consultation, gathering and sharing of Inuit Qaujimajatuqangit and Inuit Qaujimaningit amongst knowledge holders and communities, and

- identify marine-based infrastructure needs.

While it is acknowledged that many government departments and other agencies have mandates and initiatives which may address some aspects of the work required, much can be done to improve coordination and to take a more holistic approach to marine-based planning for the region.

Key recommendations by the Board associated with **Marine Planning** address the following:

- Ensuring that the Government of Nunavut, Inuit Organizations, marine users (including commercial and traditional harvesters) and communities, as well as applicable transboundary groups, in the Area of Focus are included in emergency response planning and more general marine-planning efforts that will have an effect on the Canadian offshore waters of Baffin Bay and Davis Strait (Recommendations #4, #5, #29, #31, #51)
- Supporting the preparation of community “toolkit” materials to support community members becoming involved in research, regulatory processes, and marine planning taking place in the region (Recommendation #8)
- Establishing setbacks or other development restrictions on the distance of oil and gas development activities, infrastructure, and other components to: wildlife (including marine fish, water birds and marine mammals); identified sensitive areas and areas of concern and importance (including the shoreline, floe edge, polynyas); and areas where commercial harvesting is taking place or is expected to take place, etc. (Recommendations #37, #56, #71, #76, #77)
- Developing mechanisms for communities to actively participate in impact mitigation and monitoring programs in the marine environment, including identifying changes in the quality of country food in the region (Recommendations #17, #61, #64 and #66)

Want to see more?
See Chapter 10 for all of the Board’s recommendations or read through the report

1.5.5 *Alternatives*



During the SEA the NIRB identified that there were three (3) different types of alternatives that should be considered:

1. The NIRB considered whether there were other economic development opportunities such as commercial harvesting, tourism, mining, etc. in the region that may be alternatives to oil and gas development.

2. The NIRB considered whether there were other (alternative) ways of developing offshore oil and gas resources that could reduce or limit potential impacts and maximize potential benefits. This included using alternative fuels or energy sources to provide power to production facilities and exploration vessels, or increasing benefits to communities by using on-shore infrastructure such as pipelines, etc.
3. The NIRB considered the general move away from fossil fuel-based energy production to more sustainable alternatives (e.g. solar, tidal, wind, geothermal, etc.).

The Board has noted that it is beyond the scope of the SEA for the Board to assess each of these alternatives in any substantive way. However, in developing recommendations the Board did consider information provided by several intervenors and communities regarding alternative economic development opportunities. This information suggests that opportunities such as the expansion of Arctic fisheries and tourism may contribute to more substantial and sustained economic benefits in the region. These types of development may better reflect the priorities of Inuit and residents in the 10 interested communities and the climate change commitments of the Government of Canada than is the case for oil and gas development activities.

In addition, the Board heard that there may be other (alternative) ways to develop oil and gas resources in the region that may be less energy intensive (for example using solar, wind, or tidal power) or that may provide greater benefits to the adjacent communities by using land-based infrastructure (such as pipelines and processing plants). The Board also heard that the global demand for more sustainable alternatives to producing fossil fuels should be considered in greater detail before the moratorium should be lifted. Consequently, the Board recommends that these three different types of alternatives should be considered more fully in future SEAs or project-specific assessments.

Key recommendations by the Board associated with **Alternatives** address the following:

- Conducting an analysis of the risks and benefits of other (alternative) economic development options for the Area of Focus (Recommendations #27, #52)
- Conducting an analysis of the risks and benefits of the development of alternative energy sources that could support domestic energy consumption in Nunavut (Recommendation #52)
- Conducting strategic environmental assessments of potential offshore oil and gas activities in the areas of known resources (such as the Saglek Basin and Sverdrup Basin) (Recommendation #59)

Want to see more?
See Chapter 10 for all of the Board's recommendations or read through the report

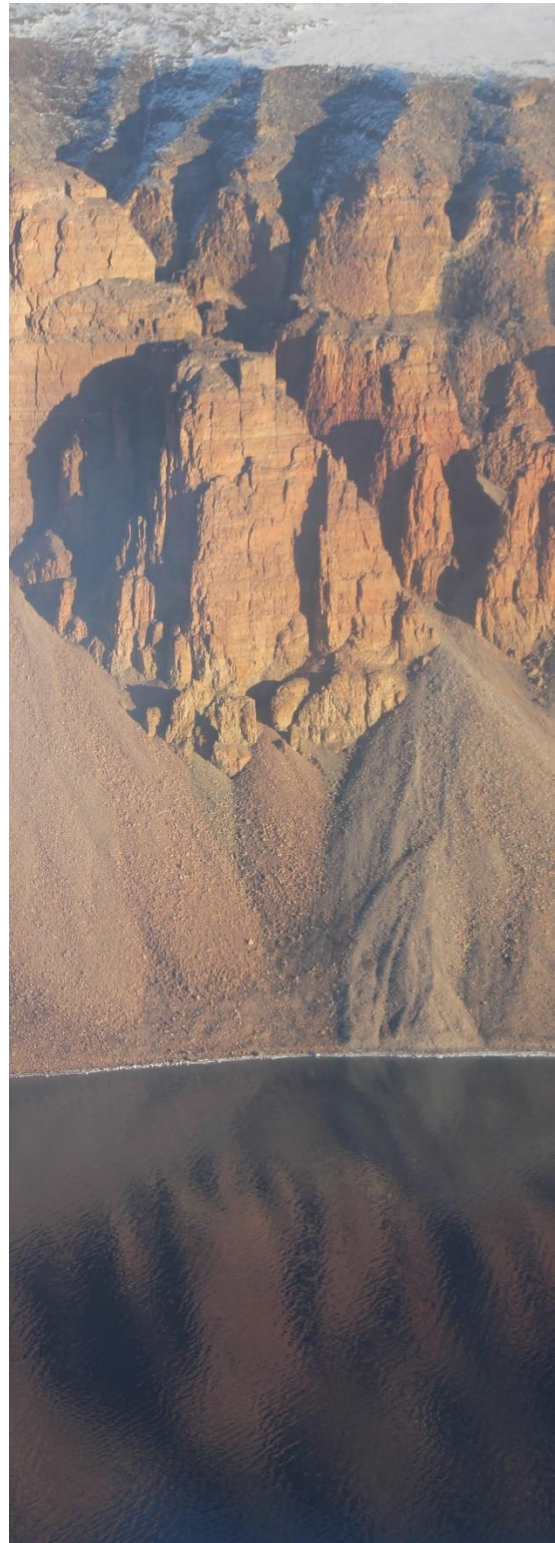
1.6. NIRB RECOMMENDATIONS

Throughout the Final SEA Report that follows, the Board has made many detailed recommendations designed to address the comments, concerns, and recommendations of the participants in the SEA. The recommendations are presented in the Board's Views Sections throughout the report, but for convenience, the Board has compiled a complete list of all the recommendations in Chapter 10. The Board has organized the summary tables in Chapter 10 into seven categories of the types of recommendations provided by the Board:

1. Consultation, Coordination and Public Engagement
2. Regulatory, Royalty and Benefits Regimes and Processes
3. Baseline Research
4. Assessment of Ecosystemic and Socio-Economic Impacts
5. Impact Mitigation
6. Monitoring
7. Impact Modelling, Mapping and Prediction

In each summary table in Chapter 10, the Board has also indicated the timing for when the Board would expect the recommendations be carried out (implemented), based on the following four timelines:

- implementation should proceed irrespective of the status of the current moratorium;
- implementation prior to the lifting the moratorium;
- implementation after the moratorium is lifted; and
- implementation during future project-specific assessments of specific oil and gas developments.



1.7. CONCLUSION

The release of the NIRB's Final SEA Report marks an important milestone as the NIRB's role in the SEA comes to an end. To complete the Board's work, the NIRB looks forward to returning to the 10 communities in the Area of Focus in the Fall of 2019 to share the Board's key findings and recommendations. The NIRB is proud of the role the Board has played, with the Qikiqtani Inuit Association and other members of the Working Group, in advancing the gathering and sharing of Inuit Qaujimagatuqangit and Inuit Qaujimaningit in this first of its kind, uniquely made-in-Nunavut SEA. The Board will apply many of the lessons learned from the SEA to its future assessments, and hopes that all SEA participants with regulatory roles in the region will do the same.

As shown by the range of documents posted on the NIRB's public registry during the SEA,³ and as summarized in the Final SEA Report, all participants in the SEA have worked hard to provide the Board with as much information as possible about the region generally, and the potential for oil and gas development specifically. The Board is grateful to all for their contributions to making the SEA as thorough and complete as possible.

However, as the number and scope of the Board's recommendations show, there is still a great deal we do not know about the region. There is much work ahead to address gaps, increase readiness, and ensure that the voices of Inuit knowledge and rights holders, and Nunavummiut generally, are clearly heard throughout. Although implementing the Board's recommendations may appear overwhelming, difficult, or complex, the Board remains optimistic that if the parties who contributed so much to the SEA work together in a collaborative, inclusive, and focused way, the SEA can lay the foundation for future priorities, processes, and the crucial work to come.



³ All documentation received as part of the SEA is available from the NIRB's public registry at www.nirb.ca, NIRB File No.: 17SN034.