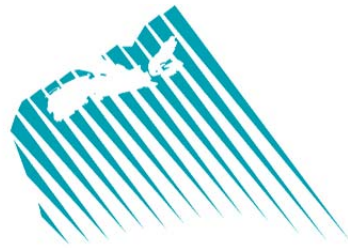


CNSOPB



CANADA-NOVA SCOTIA
OFFSHORE PETROLEUM BOARD

Strategic Environmental Assessment Sydney Basin and Orpheus Graben Areas

Scoping Document

June 2015

Table of Contents

1.0 INTRODUCTION	1
2.0 BACKGROUND	1
3.0 SEA STUDY AREA	3
4.0 PURPOSE AND OBJECTIVES.....	4
5.0 PAST AND CURRENT PETROLEUM ACTIVITY.....	5
6.0 SCOPE OF THE SEA	5
6.1 SCOPE OF THE ASSESSMENT	5
6.2 SPATIAL AND TEMPORAL BOUNDARIES.....	6
6.3 FACTORS TO BE CONSIDERED.....	7
6.3.1 Valued Environmental Components	7
6.3.2 Scope of the Factors to be Considered	9
6.3.3 Potential Exploration Activities - Environment Interactions.....	10
6.3.4 Cumulative Environmental Effects.....	11
6.3.5 Possible Effects of the Environment on Offshore Oil and Gas Activities.....	12
<hr/>	
7.0 CONCLUSIONS AND RECOMMENDATIONS.....	12
8.0 CONSULTATIONS.....	12

LIST OF FIGURES

Figure 1	Sydney Basin and Orpheus Graben Areas: SEA Study Area	4
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LIST OF APPENDICES

<i>Appendix A</i>	Components, Activities and Issues that are Outside of the Scope of the SEA
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1.0 Introduction

This document defines and describes the nature and scope of a Strategic Environmental Assessment (SEA) that is being completed by the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) in relation to potential offshore petroleum exploration licencing decisions and activities in the Sydney Basin and Orpheus Graben Areas off Cape Breton.

The CNSOPB is an independent joint agency of the Governments of Canada and Nova Scotia, that is responsible for the regulation of petroleum activities in the Nova Scotia Offshore Area, pursuant to the *Canada - Nova Scotia Offshore Petroleum Accord Implementation Acts (the Accord Acts)*. The CNSOPB's associated regulatory responsibilities include the administration and issuance of land rights and specific licences, authorizations and approvals pertaining to offshore oil and gas exploration and production activities in the Nova Scotia Offshore Area.

As part of these regulatory processes the Board has responsibility, pursuant to the *Accord Acts*, to ensure that offshore petroleum exploration and development activities proceed in an environmentally responsible manner. In doing so, the CNSOPB conducts SEAs in portions of the Nova Scotia Offshore Area that may have the potential for offshore oil and gas exploration but have not been the subject of a recent SEA or site-specific environmental assessments. The information and findings of these SEAs then help inform the Board's associated planning and decision-making processes regarding the potential issuance of future exploration rights within that particular portion of the Nova Scotia Offshore Area.

As an initial step in the planning and conduct of the SEA for the Sydney Basin and Orpheus Graben Areas, this Scoping Document provides background information related to the assessment, as well as outlining the various Valued Environmental Components (VECs) to be considered in the SEA, the scope of these VECs, and provides other relevant information and guidelines for the preparation of the SEA Report.

2.0 Background

SEA is a relatively broad-based and regional approach to environmental assessment (EA) that proactively identifies and examines the potential socio-economic and biophysical environmental issues that may be associated with a plan, program or policy proposal. It therefore allows for the identification, analysis and incorporation of environmental considerations at the earliest stages of planning and decision-making.

Because SEAs are undertaken early in the planning and decision-making process, they typically focus on providing a general description of the existing environmental setting, and on identifying and attempting to address overall environmental issues and key potential interactions. SEAs therefore describe potential environmental effects in broad terms, in order to allow these to be identified and considered early in planning, before project-specific activities are defined and proposed. SEA is not intended as a replacement for project-specific EA review processes and associated project planning and regulatory decisions. The objective of SEA is, rather, to provide the type and level of information necessary to aid and inform decision-making at the very earliest stages of the planning process.

The CNSOPB's regulatory responsibilities under the *Accord Acts* include the issuance and administration of petroleum exploration and development rights in the Nova Scotia Offshore Area through a structured and transparent rights issuance process. As part of that process, an Exploration Licence may be issued for Crown Lands through an established Call for Bids process, which has a maximum term of nine years and provides licenced owner(s) with the right to explore, the exclusive right to develop, drill and test for petroleum, and to obtain a production licence. Activities associated with such Exploration Licences may include the conduct of seismic or other geophysical surveys, geotechnical surveys, and drilling and abandonment of wells (either exploration or delineation).

This SEA is therefore intended to help inform the CNSOPB's decisions around the potential issuance of future exploration rights within the Sydney Basin and Orpheus Graben Areas off Cape Breton. In doing so, it will provide an overview of the existing environment, highlight any key environmental issues or considerations, and identify any general restrictive or other mitigative measures that may be considered for application to any such licencing decisions and/or resulting exploration activities in the region.

Specific offshore exploration activities or other petroleum related projects in the Nova Scotia Offshore Area that are proposed in relation to such licences (if issued) may require review, approval and/or compliance with a range of other applicable environmental legislation and regulations, including the federal *Fisheries Act*, *Species at Risk Act*, *Canadian Environmental Protection Act*, *Oceans Act* and others, as well as being subject to individual, project-specific EA reviews in accordance with the *Canadian Environmental Assessment Act (2012)* or the *Accord Acts*.

Again, the CNSOPB's SEA process does not replace these eventual, project-specific EA reviews, but provides information and focus to these subsequent assessments. This may include providing relevant information on the region's existing environmental setting, as well as helping define key environmental issues, interactions and mitigation measures which may require consideration in the early planning phases of individual projects and/or in their subsequent regulatory approval processes.

This SEA is designed to provide a comprehensive overview of the biological and ecological factors within the SEA area, and to provide an assessment of the anticipated potential effects of any future exploration activities on these factors. The overview of biological and ecological factors will include an overview of all of the species and their habitats within the SEA area. The assessment will focus on Valued Environmental Components (VECs). Details are provided in Section 6 – Scope of the SEA.

The reader will note that Appendix A lists various environmental factors that are considered to be outside of the scope of the SEA, including several physical components (particularly, air and water quality) as well as marine fish, birds, mammals and reptiles that do not currently have special status (as defined in section 6.3.1 below) and/or which are not subject to fishing activity or other human uses. The assessment will, however, include a key focus on all species that are protected or otherwise of conservation concern and any associated critical habitat and other special areas, as well as those species that are fished or otherwise used, as well as the identification of mitigation measures that may be required to protect these species, should offshore oil and gas exploration be considered in the future. Other marine species are not given similarly detailed and separate treatment in the assessment, as these populations are considered to be relatively abundant and healthy in the SEA Study Area at present, and/or they are not currently fished or otherwise used for commercial,

recreational and/or Aboriginal purposes. The SEA therefore focuses primarily upon those marine biota (species) that have the most relevance for the larger planning (i.e., licencing) decisions that this SEA is meant to inform and influence, with the resulting mitigations also serving to, as a matter of course, avoid or reduce potential effects upon other marine species in the area as well.

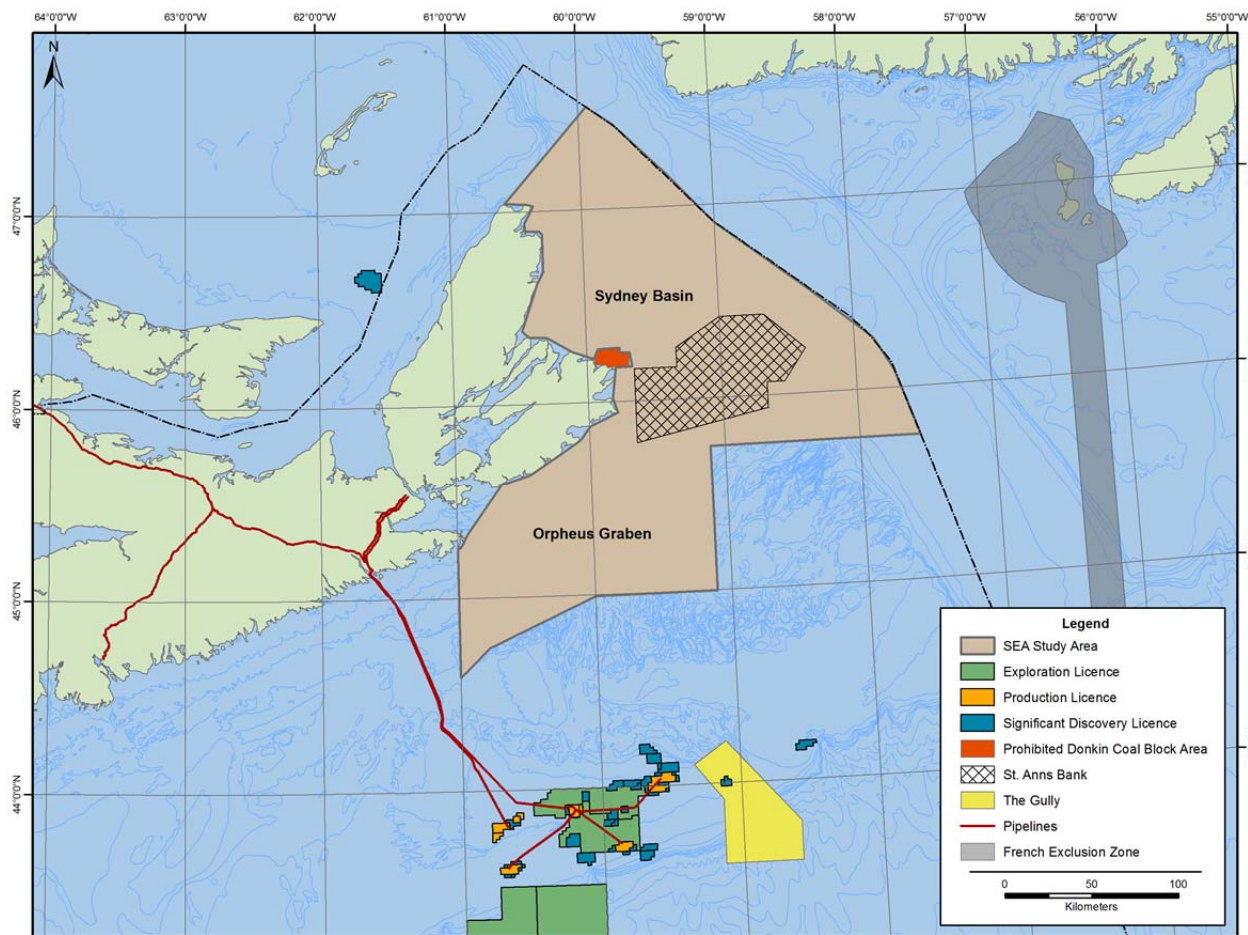
3.0 SEA Study Area

The SEA Study Area will include and encompass the marine areas shown in Figure 1.

This Study Area includes the Sydney Basin and Orpheus Graben and has been defined based on consideration of the geographic boundaries of the CNSOPB's jurisdiction (as defined by the northeastern edge of the Nova Scotia Offshore Area), as well as the limits of the study areas for previous SEAs undertaken by the CNSOPB and others for various parts of the Eastern Scotian Shelf and Slope (NS Offshore Area) and the Laurentian Subbasin (NL Offshore Area). The SEA Study Area includes lands that could be included in any potential future Call for Bids or resulting Exploration Licences in this area.

The spatial and temporal scope of the SEA is defined and described in further detail in Section 6.2.

Figure 1 Sydney Basin and Orpheus Graben Areas: SEA Study Area



4.0 Purpose and Objectives

The purpose of this study is to complete an SEA related to future offshore petroleum licencing and associated potential oil and gas activities in the Sydney Basin and Orpheus Graben Areas (Figure 1).

The SEA will consider the existing environmental setting of the Study Area and possible petroleum-related exploration activities that may occur offshore if one or more Exploration Licences are eventually issued. In doing so the assessment will:

- Provide an overview of the existing environment;
- Generally describe typical offshore oil and gas exploration activities;
- Describe and evaluate potential environmental effects associated with offshore oil and gas exploration;
- Identify knowledge and data gaps;

- Identify any species at risk and special areas that may interact with exploration activities;
- Make recommendations for general mitigative measures that may be employed during any potential offshore petroleum exploration activities in the region;
- Identify, where appropriate, activities / areas that may require additional or enhanced levels of mitigation, and identify, if feasible, the type and level of enhanced mitigation required;
- Identify follow-up (environmental effects monitoring) measures, as appropriate, that may be required to verify EA predictions and/or the effectiveness of mitigation related to future offshore petroleum exploration activities; and;
- Assist the Board in its determination in respect to the potential issuance of future exploration rights within the SEA Study Area.

5.0 Past and Current Petroleum Activity

There is currently no offshore petroleum exploration or production licences or activity within the SEA Study Area. A number of exploratory wells have been drilled in the region in the past, all of which have been decommissioned and abandoned. A SEA was prepared for petroleum exploration in the Laurentian Subbasin in 2003 and on the Misaine Bank in 2005, and there are a number of existing Exploration Licences in western and southern portions of the adjacent Newfoundland and Labrador Offshore Area.

6.0 Scope of the SEA

This section sets out the overall scope the SEA by establishing the spatial and temporal boundaries of the assessment, defining the particular “strategic decision” and associated offshore activities that it is intended to inform and influence, and in identifying the key environmental components, issues and potential interactions upon which it is focussed.

6.1 SCOPE OF THE ASSESSMENT

As part of its planning and regulatory responsibilities regarding the issuance and administration of offshore petroleum exploration (and possibly, production) rights, the CNSOPB has been undertaking SEAs of portions of the Nova Scotia Offshore Area for the past several decades. The results of this SEA will help to inform future decisions by the Board regarding the potential issuance of Exploration Licences in the Sydney Basin and Orpheus Graben Areas, by providing an overview of the key environmental components and issues which should be considered in taking these future regulatory decisions and actions, and (if issued) in the eventual planning and conduct of any subsequent oil and gas exploration or production activities in these regions pursuant to such licences.

In doing so, the SEA will describe and consider all potential and reasonably foreseeable offshore oil and gas exploration activities that may occur in the SEA Study Area if one or more such licences are

eventually issued. These include potential exploratory and delineation drilling, seismic survey activities (2D, 3D, wide angle azimuth surveying, vertical seismic profiling, geohazard surveys), geotechnical surveys, and eventual wellsite abandonment. The focus of the SEA will be on offshore exploration activities (and their potential interactions with the environment) which fall under the jurisdiction of the CNSOPB.

The SEA will include an overview description of the existing environment of the Sydney Basin and Orpheus Graben Areas, including relevant aspects of its physical, biological and human environments. This overview will be based on existing and available environmental information and datasets. As part of this exercise, the SEA will also review, evaluate and discuss the overall nature and adequacy of available environmental information for the SEA Study Area, including identifying any important data gaps and requirements that may be relevant to planning, assessment and/or decision-making at the strategic (licencing) and/or project level.

The SEA will identify and examine the key, potential environmental issues that may be associated with possible petroleum exploration activities in the Study Area, based on the description and consideration of the existing environmental setting, the typical nature and scale of these exploration activities, and their associated environmental interactions and potential disturbances.

The SEA analysis will also provide an overview of typical mitigation measures which are often implemented during offshore oil and gas activities to avoid or reduce potential environmental effects. It will also identify and consider any additional planning or mitigative measures that may be required or appropriate to further reduce or avoid the potential environmental issues and interactions associated with possible, future oil and gas activity in the Sydney Basin and Orpheus Graben Areas.

6.2 SPATIAL AND TEMPORAL BOUNDARIES

The SEA Study Area illustrated in Figure 1, which again has been defined based on the northeastern edge of the Nova Scotia Offshore Area (and thus, within the CNSOPB's jurisdiction) and the boundaries of other, previous SEAs. It encompasses lands that could be included in any potential future Call for Bids or resulting Exploration Licences in this area.

The spatial boundaries of the SEA and associated analysis will also reflect a consideration of the nature and scale of any offshore oil and gas (particularly, exploration) activities that may occur in relation to future Exploration Licences that may be issued in this region, as well as the potential environmental zones of influence of any such activities and their associated disturbances in the marine environment. The SEA will also take into consideration the Canadian Environmental Assessment Agency's Operational Policy Statement entitled "*The Process for Defining the Spatial Boundary of a Study Area During an Environmental Assessment of Offshore Exploratory Drilling Projects*" (CEA Agency 2003), as relevant.

The geographic scope of the SEA information and analysis will also recognize and consider the nature, key characteristics and spatial distribution (including movements) of the various environmental components under consideration. For the biophysical environment, this will include the associated life histories, ranges, habitat preferences, movement patterns and other key requirements and activities of species that are known or likely to be present either year-round or seasonally. It will also consider the overall location, size and extent of any special or sensitive areas that overlap in whole or part with the Study Area, as well as the overall geographic distributions of the ecological and/or socio-cultural

components and processes that have been relevant to the identification and overall integrity and value of these areas. For the human environment, the SEA will also include consideration of the overall geographic extent and distribution of socioeconomic and culturally significant activities (such as fishing, recreation, tourism etc) within and adjacent to the Study Area.

In terms of temporal boundaries, the SEA will focus upon an overall time horizon of approximately 10 years, which would generally correspond to the temporal duration of any additional Exploration Licences that could be issued in the area upon completion of the SEA. In conducting the assessment, particular consideration will be given to the overall timing and seasonality of the presence of marine biota and relevant marine activities within the Study Area, including any particularly important or sensitive time periods.

As has been the CNSOPB's practice in completing SEAs, this assessment will be reviewed within a five year period to determine whether an update is required.

6.3 FACTORS TO BE CONSIDERED

This section generally outlines the environmental components and key environmental issues and interactions that will likely be considered in the SEA, including the rationale for their inclusion.

These will be further identified and refined through an associated SEA scoping exercise, the nature and results of which will be documented in the SEA Report itself. This will include discussions with and input from applicable organizations and individuals as part of the planning, review and finalization of this SEA Scoping Document and the eventual SEA Report, as well as associated consultations with identified government departments and agencies, fisheries committees and organizations, and other identified stakeholders.

A number of environmental components and issues that will not be directly considered in the SEA are outlined in Appendix A, as well as the rationale for their planned exclusion.

6.3.1 Valued Environmental Components

Any environmental assessment should focus on those components of the environment that have the potential to be (materially) affected by the proposed project, program, plan or policy in question, and which are particularly important from an ecological perspective, valued by society and/or which can serve as indicators of environmental change. These are often referred to as Valued Environmental Components and may include both biophysical and socioeconomic aspects of the environment.

Following completion of the above described scoping exercise, the particular environmental components upon which the SEA will focus will be identified and described, as well as the rationale for their selection. Based on recent SEAs and other relevant assessments in Nova Scotia and elsewhere, these may include the following:

Species of Special Status

A number of marine fish, bird, mammal and reptile species that are known or likely to occur in the SEA Study Area have been designated as being at risk, and have varying degrees of formal protection under the federal *Species at Risk Act*, the *Migratory Birds Convention Act*, and/or other

legislation. This includes several species of marine and anadromous fish, as well as marine, coastal and land birds and a number of whales and sea turtles. Other species have also been identified as being of conservation concern or regionally rare by relevant organizations such as the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or others.

Special Areas

Several locations within or adjacent to the SEA Study Area have been identified (and in some cases, designated) as special areas under provincial, federal and/or other legislation and processes, due to their ecological, historical and/or socio-cultural characteristics and importance. Some other locations have been identified as being especially sensitive to possible environmental disturbances, including some that are important ecologically and/or for associated human activities and values.

Fisheries and Oceans Canada has, for example, selected St. Anns Bank, an area east of Cape Breton on the Eastern Scotian Shelf, as an Area of Interest (AOI) for possible establishment as a Marine Protected Area under the *Oceans Act*. There is also a Migratory Bird Sanctuary, the Big Glace Bay Lake Migratory Bird Sanctuary, and a number of Important Bird Areas (IBAs), including Bird Islands IBA, and various other island and coastal locations in the general area. There are also several existing or proposed Ecologically or Biologically Significant Marine Areas (EBSAs) in the region, as well as Cape Breton Highlands National Park and various provincial parks and protected areas which border the SEA Study Area. The SEA will list any known aggregations of habitat forming corals and/or sponges as well.

These areas, and the potential for interactions and effects resulting from future oil and gas activities on them, will be given a particular focus in the SEA.

Fisheries

Fisheries are an important and integral component of the socioeconomic environment of Nova Scotia and other parts of Canada, including the various communities and regions that extend along the coastline adjacent to the SEA Study Area and elsewhere. Commercial harvesting is conducted throughout the area through core licences or developmental fisheries permits / licences, and involves fishers from Nova Scotia and other provinces which are represented by a number of organizations. Consideration will be given to recreational fisheries, Aboriginal communal commercial fisheries, and Food, Social and Ceremonial fisheries as well. The main fish species currently targeted by commercial fisheries include, but is not limited to, important invertebrate species such as American lobster, snow crab, sea scallop, red crab and rock crab, as well as finfish such as Atlantic herring, bluefin tuna, Atlantic cod, Greenland halibut, haddock, mackerel, pollock, redfish and swordfish and other species. Some harvesting of gray and harp seals may also occur in the area. Aboriginal fisheries include all of these species, with special emphasis on lobster, halibut and flounder.

Fisheries have the potential to be affected both directly (through possible interactions between offshore oil and gas operations and fishing activity and gear) and indirectly (due to any negative changes in the size, distribution and health of fish populations or habitat) by offshore petroleum activities. Ensuring adequate and appropriate planning and mitigative (especially, communicative) measures to avoid potential interactions between offshore oil and gas exploration equipment and fishing vessels and equipment is a key priority for both industries.

Other Ocean Users

A number of other human activities and components also occur within or near the marine environment, and therefore have the potential to interact with, and be affected by, any future offshore oil and gas activities in the SEA Study Area. These include general vessel traffic to, from and through the area, as well as whale and sea bird tours and other commercial and recreational marine pursuits.

6.3.2 Scope of the Factors to be Considered

In addressing its identified objectives and the various factors listed above, the SEA will include the following information and analysis:

- An historical overview of any offshore petroleum exploration activities in the SEA Study Area and a discussion of regional oil and gas activities in the overall Nova Scotia Offshore Area;
- An overview of typical offshore petroleum exploration activities, such as well site surveys, vertical seismic profiling, 2D /3D / 3D WAZ seismic, geotechnical programs, exploration drilling (including onshore to offshore drilling) and well abandonment, as well as methods to carry out these activities (including a brief description of various types of rigs and vessels);
- An overview of the physical and biological environments of the SEA Study Area based on existing and available information and data, with any relevant data gaps highlighted;
- An overview of marine activities in the SEA Study Area, such as commercial and recreational fisheries, aboriginal fisheries, marine transportation and tourism and others;
- An identification and (qualitative) assessment of potential environmental interactions between possible future offshore petroleum exploration activities in the SEA Study Area and each of the VECs under consideration;
- Identification of mitigation measures and monitoring programs that might be considered in project-specific EAs for offshore activities to avoid or minimize residual effects. This will include both standard measures and any specific “non- typical” mitigation that may be required to address specific concerns, especially in relation to any species of special status or special areas identified within or adjacent to the SEA Study Area. This may include, for example, required mitigation in addition to that which is listed in the *Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment*;
- A discussion of potential planning implications / considerations (such as any need for additional data, special mitigation) which may have to be considered in any future, project-specific EAs for projects and activities within the SEA Study Area;
- A general discussion of the potential for, and associated environmental effects of, possible accidental events and malfunctions that may be associated with offshore oil and gas exploration activity, as well as mitigation measures to prevent or respond to such incidents; and

- A general discussion of potential cumulative environmental effects that may be associated with multiple offshore human activities in the SEA Study Area based on past, present and potential future activity types and levels.

The SEA will consider the potential activities and environmental interactions and issues outlined in the sections that follow, as a minimum, with emphasis upon factors that are particularly important and unique to the SEA Study Area. Sufficient supporting information will be provided, or referenced and summarized if it already exists in publicly available documents. Any substantive uncertainties or information gaps will also be identified.

6.3.3 Potential Exploration Activities - Environment Interactions

For each of the identified VECs, a description of the key potential interactions between offshore petroleum exploration activities and the environment will be presented. Potential oil and gas related activities include:

- Seismic surveying;
- Seabed surveying (i.e., geophysical, geotechnical data collection);
- Vertical seismic profiles (VSPs);
- Exploratory / delineation drilling (e.g., mobile offshore drilling unit (semi- submersible or drill ship)) and ancillary activities;
- Vessel traffic (e.g., supply vessels, seismic vessels, helicopters); and
- Well abandonment operations.

The main components and activities that may be associated with potential offshore petroleum exploration activities in the SEA Study Area therefore include:

- The presence and movement of drill rigs / platforms or survey vessels and other supporting ships;
- Underwater sound generated by the exploration activities (such as during seismic surveying, seabed sampling, offshore drilling) including its introduction to and transmission through the marine environment;
- Other Project related noise (vessels, aircraft) and air emissions (engine exhausts);
- Seabed sampling activity associated with the collection of core, grab and samples or other inwater activities and their associated seabottom footprints;
- Lighting on drilling platforms, seismic or support vessels and on-board equipment;
- The generation of solid and liquid waste materials and their management; and

- Potential accidental spills or the loss of material / equipment into the marine environment.

Based on these main elements, some key environmental considerations that may be associated with such marine exploration activities are listed below, with a primary focus on the VECs identified previously:

- Potential injury or mortality of marine biota resulting from exposure to seismic sound energy at very close range;
- Possible avoidance of locations that would otherwise be used by marine biota, due to underwater noise or other disturbances (such as insonified areas during a seismic survey, drilling activity, vessel traffic), which may alter the presence and abundance of marine animals as well as disturbing their movements / migration, feeding, communication, reproduction, rearing, nursery or other important activities;
- Attraction of marine biota to rigs / vessels and their lighting / flares or other environmental discharges, with increased potential for injury, mortality, contamination or other interactions;
- Possible contamination of marine biota and their habitats or feed sources as a result of environmental discharges due to planned Project activities and/or accidental events (such as drill wastes, deck drainage, large spills);
- Possible alteration of benthic habitats due to the discharge and deposition of drill cuttings, placement of other infrastructure or equipment or other activities, as well as possible accidental spills;
- Changes in the availability, distribution or quality of feed sources for marine animals as a result of offshore petroleum activities and their environmental emissions;
- Potential effects on fisheries (landings and values), other marine activities and special areas due to possible biophysical effects on the marine environment (including resource abundance, distribution or quality);
- Reduced access to preferred fishing or other marine areas during offshore oil and gas activities in certain locations, with possible decreases in activity success, efficiency, value or enjoyment; and
- Potential damage to fishing gear, vessels or other equipment and infrastructure as a result of direct interactions with oil and gas related vessels, equipment, activities or environmental discharges.

6.3.4 Cumulative Environmental Effects

The environmental effects of individual projects and activities in the marine environment are not necessarily mutually exclusive, but rather these can accumulate and interact in environmental systems to result in cumulative environmental effects.

The various aspects of the marine environment within the SEA Study Area have been and are being affected by a variety of natural and anthropogenic factors and processes, the environmental implications of which are reflected in the existing (baseline) environmental conditions of the region, an overview of which will be provided in the SEA Report, as described above.

The SEA will also include an analysis of potential cumulative effects for each VEC, based on consideration of potential future offshore oil and gas activities in the region. This will include possible cumulative effects resulting from such petroleum activities in combination with each other, as well as other (non-related) projects and activities in the region such as commercial fishing, general marine traffic, fisheries research surveys, and other relevant anthropogenic components and activities within and adjacent to the SEA Study Area.

Again, given the relatively early stage of planning, the cumulative effects analysis will focus on the identification of general issues and associated strategic planning considerations, rather than an attempt to predict specific effects and their possible spatial and temporal overlap.

6.3.5 Possible Effects of the Environment on Offshore Oil and Gas Activities

The physical environmental setting of an area is an important consideration in the planning, review and conduct of any offshore oil and gas exploration and development activities. An appropriate understanding, and careful consideration, of environmental characteristics and phenomena such as severe winds, waves, currents, ice, precipitation and other factors is required so that offshore activities can be designed and implemented appropriately, and in a manner that helps ensure that human health and safety, equipment and infrastructure and the environment are protected.

The SEA will therefore also consider and generally describe the potential implications of the environmental characteristics of the SEA Study Area for the future planning and possible conduct of oil and gas activities in this region.

7.0 Conclusions and Recommendations

The SEA will conclude with a clear and concise summary of the key findings and outcomes of the assessment. This will include any eventual recommendations stemming from the SEA analysis, including mitigation measures that may be required or appropriate, as well as key planning considerations. This section of the SEA will also highlight key data gaps and information needs, and make relevant recommendations regarding the possible focus of future, project-specific EA reviews.

8.0 Consultations

The CNSOPB's approach to planning and conducting its SEAs is an inherently open and consultative one, which include various mechanisms and opportunities for relevant organizations and individuals to receive and review information, and as well as to provide information and perspectives that are relevant to the SEA and its scope. This includes opportunities to identify questions, concerns and

issues which require consideration in the SEA and which may be relevant to associated licencing decisions by the Board.

A number of identified government departments and agencies (Environment Canada, DFO, DND, and possibly others) and stakeholder groups, including the CNSOPB's Fisheries Advisory Committee and others, will be involved in the review and finalization of this SEA Scoping Document. Once it is completed and available, the Draft SEA Report will also eventually be announced, posted on the CNSOPB website, and made available for a public review and comment period.

It is anticipated that the Draft SEA will be published for public and stakeholder review and comment for an approximately 6-week period, commencing around mid-August 2015. Any and all comments received will be considered by the CNSOPB in revising and finalizing the SEA Report, with the final SEA documents anticipated to be published in October 2015.

APPENDIX A

Components, Activities and Issues that are Outside of the Scope of the SEA

Components, Activities and Issues that are Outside of the Scope of the SEA

The following components, activities and environmental issues are proposed to be excluded from the scope of this SEA, as there is limited identified potential for environmental interactions and significant effects to occur, and because of the existence of standard and proven mitigation measures that would serve to avoid or reduce these issues and any associated adverse environmental effects.

In addition, each of these environmental considerations can and would be dealt with on a project-specific basis through appropriate planning and mitigation, and are therefore not directly relevant to the type and level of planning (in this case, licencing) processes and decisions that the SEA process is intended to inform and influence.

1) Air and Water Quality

Although there are a number of potential sources of atmospheric emissions associated with planned and routine offshore oil and gas exploration activities, these are not likely to cause exceedences of applicable air quality standards or guidelines, especially given the often restricted and short-term nature of these activities and emission sources, and because there are often few (if any) receptors in the marine environment.

The assessment and mitigation of possible atmospheric emissions and air quality effects resulting from offshore exploration projects can therefore be excluded from the SEA and any subsequent project EAs, provided that future licences holders / operators adhere to relevant regulatory requirements and guidelines, including the following:

- MARPOL Annex VI, *Regulations for the Prevention of Air Pollution from Ships*; and the
- Air emissions provisions of the *Offshore Waste Treatment Guidelines*, including related submission of greenhouse gas emission information.

Similarly, although offshore oil and gas (exploration and production) activities may have associated environmental discharges from platforms and vessels that can have resulting effects on water quality, these potential emissions and their environmental effects can likewise be addressed through standard practices and mitigations, including future leaseholders / operators adherence to the:

- Nova Scotia Offshore Area Petroleum Geophysical Regulations;
- Offshore Waste Treatment Guidelines; and the
- *Fisheries Act* (Section 36).

As referenced earlier, potential accidental events and malfunctions (such as a large offshore blow-out) and their possible environmental consequences are being generally considered in the SEA, including any associated air and/or water quality issues. For the purposes of this assessment, the consideration of such issues will be focused on their possible implications for key environmental components and features, namely any associated effects on each of the VECs identified and proposed previously (Species of Special Status, Special Areas, Fisheries, and Other Ocean Uses).

2) Marine Fish, Birds, Mammals and Reptiles

The SEA includes a key focus on marine biota which are known or likely to occur in the SEA Study Area, including relevant species of marine fish, birds, mammals and turtles.

The overview of the existing environment will include a description and discussion of these species, their distribution and abundance, timing of occurrence and key activities, as background and context, and as a key potential information source for planning and assessing any future exploration activities, once these are defined and proposed for particular locations and times (should Exploration Licences be issued upon completion of the SEA). As above, there exists a number of standard and proven mitigation measures that are typically required and implemented in relation to these components, in order to avoid or reduce possible adverse effects upon marine biota. These include, for example, those outlined in the *Statement of Canadian Practice with Respect to the Mitigation of Seismic Noise in the Marine Environment* (SOCP). The SOCP was developed as a result of an extensive review by federal and provincial government advisors and scientific experts of the most effective and appropriate mitigation measures used world-wide to minimize adverse environmental effects on marine life. Compliance with the SOCP will result in the avoidance or reduction of adverse residual environmental effects on marine life. Should gaps in mitigation be identified through the course of this SEA, these will be highlighted in the corresponding VEC assessment.

The SEA therefore focuses primarily upon those marine biota (species) that are listed and protected or which are otherwise of special conservation concern (as defined in section 6.3.1 above), as these have the most relevance for the earlier and larger planning (ie, licencing) decisions that this SEA is meant to inform and influence. This includes marine species (individuals and populations) as well as known important and protected areas, habitats, activities and times for these species (such as feeding, migration, nursery, and/or spawning and rearing grounds and periods). Other marine species, areas and times which are relevant from a human use (such as fisheries) and/or other ecological and societal perspective (such as for special areas) are also considered integrally as part of those VECs.