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St. Lawrence Coalition comments re: Western Newfoundland Draft SEA



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Ms. Young:

Please find attached comments on behalf of our clients in the St. Lawrence Coalition: Attention Fragîles, David Suzuki Foundation, and SNAP-Québec. The attached document lays out our clients' issues and concerns with aspects of the Draft Western Newfoundland Strategic Environmental Assessment Update (Draft SEA Update) and the process by which it was produced. It includes a suite of recommendations for the Board to move forward so that the SEA Update proceeds with the maximum of transparency and information.

Respectfully,



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Introduction

The Draft Western Newfoundland Strategic Environmental Assessment (SEA) Update, written by AMEC and released by the C-NLOPB in May 2013,¹ is open for public comment until September 27, 2013. Members of the Saint Lawrence Coalition are taking this opportunity to share their thoughts on the SEA draft and process with the C-NLOPB. The submission emphasizes several principles, especially the importance of complete and independent scientific advice, full public information, and precautionary decision-making based on the best available information about risks. These principles should be applied to several areas of importance for the SEA Update, especially oil spill modelling and response gap studies; the use of dispersants; and the base of biological data underlying SEA Update. The recommendations suggest several steps to appropriately assess and reduce the risks from oil and gas development more generally. These steps include laying out standard methodologies for modelling oil spills and for assessing natural resource damages. Adopting an appropriate risk tolerance framework supported by the best available data can provide clarity to the public (and to industry) about the requirements for oil and gas exploration.

The public consultations about the SEA Update should be carried out in a manner that will provide the public with full information about the risks and benefits of oil and gas exploration and drilling, including a full understanding of the response gaps that will arise in case of various types of oil spill. Once this information has been presented, it is imperative that the public have an opportunity to respond to the C-NLOPB's view of the facts and its proposed response.

Civil society is becoming concerned about the approach of the Board in the wake of several decisions that could be interpreted as favouring industry interests and withholding relevant information and decisions from public scrutiny. There are still opportunities for the C-NLOPB to amend its approach to the content and process of the Western Newfoundland SEA Update. But at this point in time, it is our submission that no "social license to operate" in the offshore industry has been secured by any project proponent or the CNLOPB.

In this latter vein, we note that Québec's *Évaluation environnementale stratégique sur la mise en valeur des hydrocarbures dans les bassins d'Anticosti, de Madeleine et de la baie des Chaleurs* (EES2), produced by the consulting firm of Génivar, was released to the public recently. We agree with Genivar's conclusions on the issue of "social acceptability",² and note its recommendations regarding the need to determine whether a sufficiently large consensus is possible with regard to oil exploitation in the Gulf is possible.

More generally, the CNLOPB should note how the EES2 identifies a number of issues that must be addressed in order to continue in the decision process regarding oil development in the St. Lawrence Gulf. These issues are: 1) social acceptability³, 2) the inclusive nature of the Gulf of St. Lawrence and of Chaleur Bay⁴, 3) adequate knowledge of the receiving environment⁵, 4) current response capability in case of an accident⁶, 5) proper framework for eventual oil exploration and development activities⁷, and 6)

¹ This will be referred to as the Draft SEA Update in subsequent footnotes.

² "Acceptabilité sociale", p. 556

³ "Acceptabilité sociale", p. 556

⁴ "Globalité du golfe du Saint-Laurent et de la baie des Chaleurs", p. 562

⁵ "Connaissance adéquate du milieu récepteur", p. 565

⁶ "Capacité d'intervention adéquate en cas d'événement accidentel", p. 567

⁷ "Encadrement adéquat des éventuelles activités d'exploration", p. 569

the delineation of exploitable areas⁸. For each of these issues, recommendations are made and the means to carry out those recommendations are formulated. We respectfully submit to the CNLOPB that these respective SEA processes in Quebec and Newfoundland's portions of the Gulf must be reconciled, and that the public from all regions of the Gulf must be allowed to contribute to the decisions being made, particularly as regards the "social acceptability" and the "social license to operate" of offshore drilling in the Gulf.

1. Absence of Recommendations in the Draft SEA Update

The Saint Lawrence Coalition has urged the Board to use the SEA Update as an opportunity to clarify and discuss the priorities of the Board in relation to risk tolerance from oil and gas development in this area, and to respond to specific environmental protection proposals. Residents around the Gulf of Saint Lawrence would benefit from an opportunity to participate in creating a framework to assist the Board in disposing of future petroleum development decisions.

The SEA provides information on a number of environmental and socio-economic issues relevant to the Western Newfoundland SEA Update Area, but it does not include any draft or proposed recommendations. Because the document does not include the Board's conclusions and recommendations resulting from this information, it does not address the central "strategic decision" that the SEA Update is intended to inform⁹ (i.e. whether to issue further exploration licenses in the Newfoundland area of the Gulf). Thus, the SEA process to date has not provided civil society with an opportunity to react to a real proposal from the Board or from its consultant. The public has not been presented with concrete conclusions or directions. With respect, we find this situation to be unacceptable. To present the basic factual issues entailed in making oil and gas exploration decisions, without any clarification as to what decisions and measures are actually under consideration, undermines the consultation process. The Draft SEA Update does not synthesize and analyse the available information to determine a level of acceptable risk.

Recommendation: The first round of comments on this draft SEA will be hobbled by the Board's failure to provide any draft recommendations or conclusions. We suggest that the Board remedy this failure by publishing its recommendations and conclusions, potentially in the form of a separate policy statement, and then receiving public comments on this proposal. We also suggest that the Board respond to or incorporate these public comments into a statement on the Board's standards for environmental risk resulting from oil and gas exploration.

2. Public Consultations

The consultation report annexed to the Draft SEA Update¹⁰ shows the public's desire for more information. The report demonstrates the generally high level of concern the public has about the risks of offshore oil and gas exploration. Contrary to the draft SEA report's relative disregard for development risks, participants in the public meetings were overwhelmingly opposed to the idea of offshore

⁸ "Délimitation, le cas échéant, des aires exploitables", p. 575

⁹ *Draft SEA Update* p. 5.

¹⁰ AMEC, "Western Newfoundland and Labrador Offshore Area Strategic Environmental Assessment Update – Consultation Report – Draft" (May 2013) online: C-NLOPB: <<http://www.cnlopb.nl.ca/pdfs/wnlsea/wnlseaupdateen.pdf>>.

development in the Western Newfoundland area and the Gulf of St. Lawrence. There was substantial concern regarding the amount of information that remains unknown about the Gulf's currents and biota. People were concerned about the possibility of oil spills and the dearth of spill response equipment available,¹¹ the effects of dispersants and of seismic testing,¹² the potential for fracking, and the impacts on protected areas such as Gros Morne National Park.¹³

Participants in the sessions echoed a number of the St. Lawrence Coalition's proposed steps and solutions, including an independent scientific review¹⁴ and greater interprovincial integration of offshore oil and gas strategy and assessment.¹⁵ The consultation report also shows that there were many calls for a moratorium on hydrocarbon development in the Gulf of Saint Lawrence,¹⁶ and some took issue with any continuation of licensing or exploration while the SEA Update is in progress.¹⁷ The calls for updated scientific investigation before authorizing oil and gas exploration complement the local knowledge brought to bear during the consultations. Residents shared their knowledge of historical and changing patterns of fish distribution and life cycles.¹⁸ It is obvious that these patterns are critical to the maintenance of traditional ways of life and a long-term economic base for people in the area. Justifiably, the public in areas where oil and gas development could proceed is sceptical that they will benefit to the same extent as the firms doing the exploration.

As noted in the Consultation Report, the Innu of Ekuanitshit do not support oil and gas exploration in the Gulf at this time.¹⁹ Some of the Mi'gmaq who were consulted requested a moratorium of 10 to 12 years, until the environment is better understood.²⁰ Consultation of aboriginal peoples is particularly important: the Board has a legal obligation to consult aboriginal peoples before taking actions that could affect their constitutionally protected rights, including potential rights that are under negotiation and whose scope may be unclear.²¹ The Board may then have a duty to accommodate these aboriginal rights. The C-NLOPB has not expressed a clear legal rationale explaining how its actions toward leasing and exploration do not represent infringements on claimed aboriginal rights.

We note that the consultation on the Draft SEA is being carried out mostly during the summer, when many stakeholders in the fishery and tourist industries are occupied with seasonal activities and other stakeholders tend to be on holiday. By extending the comment period to September 27, 2013, the Board may alleviate the depressed public participation that would have resulted from allowing comments only in the summer. Furthermore, the consultation report demonstrates that the public was unhappy with the

¹¹ AMEC, Consultation Report, p. 21.

¹² AMEC, Consultation Report, p. 37.

¹³ AMEC, Consultation Report, p. 39.

¹⁴ AMEC, Consultation Report, p. 22.

¹⁵ AMEC, Consultation Report, pp. 21, 22, 31, 35, 43.

¹⁶ AMEC, Consultation Report, pp. 14, 17, 18, 19, 38, 40, 42, 46.

¹⁷ AMEC, Consultation Report, p. 21.

¹⁸ AMEC, Consultation Report, p. 30.

¹⁹ AMEC, Consultation Report, p. 52.

²⁰ AMEC, Consultation Report,

²¹ *Haida Nation v British Columbia (Minister of Forests)* 2004 SCC 73.

format of the consultations presenting the SEA (consisting of presentations and conversations in small groups); several commented that there ought instead to have been a “hearing” format.²²

Taking the Draft SEA Update in the context of the pro-development signal sent by the Board’s May 16, 2013 Call for Bids, and its extension of Corridor Resources’ Phase I drilling window to January 2016, we have legitimate concerns that public feedback will not be taken into account in the recommendations of the SEA Update. Even if no licences are issued as a result of the Call for Bids, the Call itself has created an impression that the C-NLOPB prefers to move ahead in advance of the SEA process to facilitate oil and gas development rather than to foster cautious, precautionary environmental decision-making. The C-NLOPB has committed to making environmental quality “paramount” in its decisions,²³ and this commitment requires that a moratorium on oil and gas exploration in the SEA Area should be available if the circumstances justify it.

Recommendation: The Board should take the appropriate steps to remedy the failure to hold satisfactory public consultations with affected stakeholders throughout the regions that could be affected by oil and gas development in the SEA Update Area. In particular, the Board should give the public an opportunity to respond to its particular proposals and recommendations before the SEA is finalized.

3. Risk Management and Project Approvals: the Role for the SEA’s Recommendations

Our statement in relation to risk management priorities from December 2012 still presents an appropriate and viable route toward risk management and predictable decision-making by the Board in future rights issuance and permitting processes:

“With respect to the risks of releasing oil into the environment, any project or activity that could result in a blowout, or risk the release of large volumes of oil in to the Gulf is unacceptable. Such an event would be catastrophic for the Gulf ecosystems, and for economic and cultural values of the people of Eastern Canada, as it would have devastating consequences for the fishery in the Gulf. Drilling should only ever be approved if it can be shown that the risk of such an occurrence is very small.

In addition to the risk of oil releases, we are concerned with the risks and other impacts of petroleum development and industrial activity on the economic, ecological and cultural values in the Gulf. Any project or activity that presents a risk to a crucial economic resource, a particularly sensitive area, or critical habitat for marine species should be deemed unacceptable.”

Recommendation: In our view, this statement should form the basis of the recommendations of the SEA, and the backbone of a risk framework endorsed by the Board. While we understand that it is difficult to predict the scope of additional future petroleum development activity,²⁴ the SEA update period is an appropriate occasion for the Board to discuss the criteria and priorities it will take into account in

²² E.g. AMEC, Consultation Report, p. 15: “A stated preference that the SEA consultations should have included detailed technical presentations and a “hearing” type format once the SEA is completed, rather than these early and general open houses.” See also pp. 35, 38.

²³ Canada-Newfoundland Offshore Petroleum Board, “Mandate and Objectives”
http://www.cnlopb.nl.ca/abt_mandate.shtml

²⁴ As AMEC discusses in the Draft SEA, p. 73, it is difficult to predict the impacts of an undefined amount of potential future production; the scope of the SEA includes surveys and well drilling in the same order of activity as currently proposed.

approving or rejecting any future proposals in the Western Newfoundland SEA Update area. If the final SEA Update finds the kind of substantial risks that we believe exist, the Board should consider using its powers in s.56 of the *Canada-Newfoundland Atlantic Accord Implementation Act* to recommend that no activity occur on any leases in the SEA Update Area due to serious environmental problems, and then invite the federal and provincial ministers to confirm this fundamental decision.²⁵

4. Interprovincial Collaboration and Cooperation

As mentioned above, many comments from the public consultations and stakeholder meetings illustrate the public's awareness of the Gulf as a shared, interconnected interprovincial resource. Management of the Gulf, including oil and gas exploration and production decisions, should be consistent with this reality.

Recommendation: The Board should engage with other jurisdictions to ensure that resource management decisions in the Gulf are based on the best available information; that updated information and research is continually being sought out; and that decisions by the Board, to the extent that they could affect another jurisdiction, do not exceed that jurisdiction's tolerance for risks to its ecological, cultural, economic, or social values. Public concerns are sufficiently broad and deep-rooted in many different constituencies to make it appropriate for the federal and provincial ministers to engage in a broader process of intergovernmental consultation, resulting in an SEA for the entire Gulf.

5. Mitigation and Response Capacity

The Draft SEA Update indicates that there is a lack of information available on the efficacy of many response techniques in case of a spill.²⁶ The document also contains some suggestions regarding oil spill response, but the suggestions do not account for these uncertainties. For instance, “[i]n the event of increased offshore petroleum activity in the SEA Update Area, other considerations at a regional and strategic level could include, for example: potential pre-deployment of response equipment and materials in Western Newfoundland and/or around the Gulf of St. Lawrence; development of inter-jurisdictional protocols to respond to a major environmental emergency (including response management); inter-jurisdictional waste management coordination; and inter-jurisdictional response exercising.”²⁷ The Board should have included in the Draft SEA a commitment to carry out such actions and to indicate what priority it would place on any given item.

The Draft SEA Update acknowledges the importance of safety culture and the prevention of accidents. For instance, it refers to the conclusion of the Deepwater Horizon Study Group that “the Macondo well blowout was a preventable incident had progressive guidelines and practices been followed, amongst

²⁵ *Canada-Newfoundland Atlantic Accord Implementation Act*, SC 1987 c 3 s 56: “56.(1) Subject to subsection (2), the Board may, in the case of (a) an environmental or social problem of a serious nature, or (b) dangerous or extreme weather conditions affecting the health or safety of people or the safety of equipment, by order, prohibit any interest owner specified in the order from commencing or continuing any work or activity on the portions of the offshore area or any part thereof that are subject to the interest of that interest owner. 2) An order of the Board made in a case referred to in paragraph (1)(a) is subject to sections 31 to 40 [i.e. it is a fundamental decision]...” A s.56 order also results in an extension of the period that of the term of any interest that has been issued (s.56(5)).

²⁶ Draft SEA, p. 401.

²⁷ Draft SEA Update, p. 381.

other contributing factors”.²⁸ A focus on safety culture can be beneficial to prevent emergencies from arising, but commitments to safety culture are no substitute for comprehensive, fully-resourced emergency response plans, and especially not for precautionary decision-making by regulators to reflect inevitable gaps in oil spill response (which will be discussed more fully in the next section).

Recommendation: The C-NLOPB should commission studies designed to assess and reduce risk from oil and gas development (including worst-case scenarios), fill gaps in technical information in the SEA, and result in recommendations for appropriate procedures and equipment if any projects are approved. This is a key opportunity to allow the Board to learn from previous studies and integrate the findings into their approach to development permits. These studies should be carried out by the appropriate independent experts and should include:

- The promised review of operators’ spill response capacities, which was recently completed for only one sector (Jeanne D’Arc Basin), should be made public once completed for all sectors under the CNLOPB’s jurisdiction. As we will discuss below, this study should include comprehensive information on the impact of response gaps on the possibility of a successful response to a small, medium, or large oil spill;
- More information in the SEA on the risks of technical malfunctions such as those caused by the icing of equipment. This is an important issue to consider in determining the timing of any project that may be approved, but there is little information in the SEA on the operational, safety, and environmental implications of icing;²⁹
- An assessment of the need for an Eastern Newfoundland response centre, which would be able to rapidly mobilize to address any spills that occur without waiting for equipment to arrive from Western Newfoundland operations.

Recommendation: The SEA should indicate that projects will not be approved unless proponents demonstrate to the regulator that their emergency prevention and response plans are fully resourced and represent a substantial improvement over existing plans and techniques in use in similar conditions. Such plans must quantify and take into account the applicable response gap, which necessarily hinders any spill response efforts in case of a spill. Additionally, the SEA should confirm that there is a same-season relief well requirement for all offshore oil and gas operations in the Western Newfoundland section of the Gulf of St. Lawrence.

6. Response Gaps

The Board states that “an accidental event or malfunction is an unlikely, though unfortunately possible, occurrence”, but then continues to defend the industry by saying that “most offshore wells are drilled without incident, and the likelihood of a significant and environmentally damaging spill occurring is extremely low.”³⁰ It is obviously true that not every well, pipeline, or tanker results in a serious incident. Statistics about the unlikelihood of an accident are reassuring, at least in the abstract: only four blowouts out of 647 Canadian wells drilled by 2010 (one blowout every 16 years),³¹ one pipeline spill over 1,000

²⁸ Draft SEA Update, p. 57.

²⁹ Draft SEA Update, p. 129-130.

³⁰ Draft SEA Update, p. 8.

³¹ Standing Committee on Natural Resources, testimony of Mr. David Pryce (May 13, 2010).

litres in Canada between 2003 and 2012,³² and 3.3 tanker spills over 7 tonnes per year worldwide from 2000 to 2009;³³

Probabilistic statements like these are cold comfort to residents when such an industrial accident actually occurs in their area. Time and time again, these incidents occur, causing tremendous damage to the surrounding communities and environment. Emergency response techniques often fail to perform as expected. Sometimes conditions are unfavourable enough that no response is possible – that is to say, there is a response gap. Any review of response plans is inadequate unless it directly addresses this response gap, because response capacity is *defined by* the response gap. Without discussion of this response gap, the EA and any associated studies of the industry’s response capacity will be incomplete.

The risk, however small, of a serious incident arising during a “response gap” period is why the SEA must provide a realistic idea of the amount of time when no response will be possible, and the effect that this will have on the impact of a spill or other incident. Work carried out by WWF-Canada (in response to SL Ross response gap studies conducted for the National Energy Board’s Arctic Offshore Drilling Review) confirms that for the near offshore Beaufort Sea, taking into account periods of ice cover as well as other weather conditions, there is no response possible 66% of the time even in June (see **Figure 1**). Similar calculations for the weather conditions prevailing in the SEA update area would give a more realistic idea of the amount of time when response measures are likely to be ineffective.

Figure 1: WWF and SL Ross Calculation of Response Gaps in the Beaufort Sea and Davis Strait³⁴

³² Transportation Safety Board, “Statistical Summary, Pipeline Occurrences 2012” (2012) online: TSB <<http://www.bst-tsb.gc.ca/eng/stats/pipeline/2012/ss12.asp>>.

³³ International Tanker Owners Pollution Federation Limited, “Statistics” (2012) online: ITOPF <<http://www.itopf.com/information-services/data-and-statistics/statistics>>.

³⁴ WWF Canada and Ecojustice (September 7, 2011) submission to Arctic Offshore Drilling Review, NEB File: OF-EP-Gen-AODR 01 Letter of Comment, S.L. Ross Spill Response Gap Study for the Canadian Beaufort Sea and the Canadian Davis Strait, p. 7.

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Percentage of Time When No Response Is Possible ¹⁴									
		Jan-May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Beaufort Sea	Near Offshore	≤100	66	54	56	62	81	≤100	≤100
	Far Offshore	≤100	82	65	66	66	84	≤100	≤100
Davis Strait	Central	≤100	≤100	83	44	44	59	84	≤100
	West Central	≤100	≤100	≤100	45	48	59	84	≤100
Percentage of Open Water Periods When No Response Is Possible ¹⁵									
		Jan-May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Beaufort Sea	Near Offshore		20	23	40	56	65		
	Far Offshore		20	22	41	56	65		
Davis Strait	Central			27	37	44	59	83	
	West Central				35	44	58	84	

Note: The dark shaded cells represent months outside the potential drilling season, when no countermeasure is possible. These cells are left blank in the lower table because there are no open water periods in those months.

The Draft SEA does not contain any substantial study of the impact of the physical environment on the response gaps that exist as a result of weather conditions, regardless of the response capacity that may be available in terms of technology and personnel. There is no way for the SEA to determine whether any further licensing of exploration or production activities is appropriate, without providing a detailed view of response gaps. This deficit carries on through to the Board’s description of its project authorization procedures, which does not entail consideration of the response gap for the region sought to be developed, in addition to plans showing the response capacity of the drilling proponent.

The current Draft SEA contains some information on the physical environment and climate which would affect response gaps, including data on winds, temperature, precipitation, visibility, waves, and sea ice:

- Wind: “The maximum hourly wind speeds (Table 4.5) indicate that gale force winds, in the range from 17.5 - 24.2 m/s (MSC 2012), occur throughout the year, while storm force winds, in the range from 24.7 - 32.4 m/s, are expected to occur in December and January.”³⁵
- Temperature: “There is a notable north-south air temperature gradient within the SEA Update Area, with annual average temperatures being about 4C higher at Blanc Sablon compared to Port aux Basques, and winter (January-March) average temperatures 6C higher, documented in detail by Galbraith et al (2011).”³⁶ Temperatures in March as low as -19.5C have been recorded, and the temperature has been known to drop below freezing in June.³⁷
- Storms and Precipitation: over the course of a year, precipitation (including rain, drizzle, hail, thunderstorms) occurs 24.4% of the time, with a peak of 40.8% in January and a low of 12.0% in August.³⁸

³⁵ Draft SEA Update, p. 102.

³⁶ Draft SEA Update, p. 106.

³⁷ Draft SEA Update, p. 107.

³⁸ Draft SEA Update, p. 109.

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- Visibility: “Poor and very poor visibility states occur at a relatively low frequency year round, with the combined maximum occurrence of about 14 percent occurring in January and July, and the combined minimum of less than 5 percent per month occurring in September and October. The highest frequency of occurrence of very poor visibility (<0.5 km) of 8.5 percent occurs in July.”³⁹
- Waves: the maximum monthly significant wave height is never lower than 5m, except in July.⁴⁰
- Sea Ice and Icebergs: sea ice occurs in much of the study area, with freeze-up around January 15 in the northern part of the SEA Update Area and covering most of the study area by February 26, including some thicker deformed ice north of the Port-au-Port peninsula.⁴¹ Sea ice can occur in the northern parts of the study area until June, and icebergs also occur.

All of this information about the sea and weather conditions prevailing in certain parts of the SEA Update Area is available. The Draft SEA Update does not bring this factual information together to demonstrate its impact on the usefulness of response equipment and techniques proposed for use in the study area. The various project design and response capacity considerations and testing discussed in the Draft SEA Update (see particularly s.3.2.6.3)⁴² do not include a discussion of the response gap. If adverse conditions prevail in the Gulf at the time when an oil spill response is needed, the available measures would be even less effective.

Recommendation: The SEA or the response capacity study should include account for response gaps, and factor these into the existing studies on the effectiveness of various response options. No decision regarding the reasonableness of future offshore license issuance should be made until response gaps are publicly accounted for and integrated into the SEA.

7. Spill Modelling

Participants in the Old Harry EA now understand clearly that allowing industry to provide its own models of worst-case scenario oil spills invites substandard and misleading work. The Board should not put itself in a position where each individual project application understates the risks and impacts of a spill, requiring months of follow-up by already under resourced government departments and civil society organizations. Project proponents have an incentive to understate the risks from worst-case spills. In the case of the Old Harry environmental assessment, Corridor Resources and its consultant have refused to meaningfully amend spill modelling to include the bathymetry and sub-surface ocean currents in the area, or to model any oil heavier than a light Cohasset crude oil spilled in “batches” every 6 hours rather than a continuous and accumulating spill. This refusal comes despite repeated critiques by the Department of Fisheries and Oceans and Environment Canada.^{43,44} Thus, after two iterations of the EA, there is still no accurate assessment of a worst-case scenario spill modeled in the Old Harry EA study area.

³⁹ Draft SEA Update, p. 110.

⁴⁰ Draft SEA Update, p. 112.

⁴¹ Draft SEA Update, p. 124.

⁴² Draft SEA Update, p. 65-70.

⁴³ See the most recent response by DFO: Department of Fisheries and Oceans, “Response to Revised EA Report” (August 6 2013) online: C-NLOPB: < <http://www.cnlopb.nl.ca/pdfs/corridorresinc/dforesponse.pdf>>.

It is not a good investment of regulatory and civil society resources to continually expend energy critiquing inadequate spill modelling and other aspects of project-specific EAs; the Board can help to lay out clear expectations for the information that proponents must provide and acceptable, peer-reviewed methods of modelling worst-case scenarios.

Recommendation: The Board should learn from the continuing issues with Corridor Resource’s oil spill modelling and lay out standard requirements for oil spill modelling expected of proponents in the SEA Update area. This will enable conservation of regulator and civil society energies and a better understanding of the scale of response that would be required in case of various types of spills from any proposed projects.

8. Liability Limits and Natural Resource Damages

We note that it may be necessary to alter the final SEA Update to reflect updated liability limits if the current reform proposal⁴⁵ passes through Parliament in the fall: currently it refers to the \$30 million absolute liability limit.⁴⁶ The liability limits for offshore oil and gas activities under the *Canada-Newfoundland Atlantic Accord Implementation Act* are slated to be updated to \$1 billion in absolute liability for damage from oil spills. Developers must also demonstrate that they have financial assets of at least \$1 billion.⁴⁷ The proposed reforms also permit the government to recover “natural resource damages”. The C-NLOPB could follow the lead of US regulators who have pro-actively laid out natural resource damage assessment methodologies.⁴⁸ This may expedite the recovery of natural resource damages in case of a major spill.

However, the proposed reforms currently include ministerial discretion to reduce the absolute liability limit, financial capacity, or deposit to reflect projects that are considered to be lower risk. The exercise of this discretion would allow the potential for a public subsidy of oil and gas operators, should operational risks turn out to be greater than anticipated by the ministers. If a given project is truly lower risk, then it would remain an attractive investment even without this subsidy.

Recommendation: when appropriate, the C-NLOPB should update the Western Newfoundland SEA to include the new, higher liability limits that the federal government intends to introduce. In the near future, the C-NLOPB should also provide guidelines governing the assessment of natural resource damages occurring as a result of spills in its area of jurisdiction. The C-NLOPB should also commit not to request a lower liability limit, financial capacity, or deposit for any offshore project, even if it receives this power through new legislation.

9. Hydraulic Fracturing in the SEA

⁴⁴ C-NLOPB, “Consolidated Comments on the Revised Environmental Assessment of the Old Harry Exploration Drilling Program” (August 19 2013), online: C-NLOPB: <http://www.cnlopb.nl.ca/pdfs/corridorresinc/revconcomments.pdf>.

⁴⁵ Natural Resources Canada, “Federal-Provincial Co-operation Modernizing Liability for Offshore Petroleum Drilling Operators” (June 18, 2013) online: <http://www.nrcan.gc.ca/media-room/news-release/2013/7202>

⁴⁶ *Draft SEA Update* p. 54.

⁴⁷ Natural Resources Canada (June 18, 2013) “Backgrounder: Federal-Provincial Cooperation Modernizing Liability for Offshore Oil and Gas Exploration and Operations” Ottawa: Natural Resources Canada.

⁴⁸ National Oceanic and Atmospheric Administration, “Damage Assessment” (not dated) online: NOAA <http://www.gulfspillrestoration.noaa.gov/assessment/>.

Although the Draft SEA Update includes a section on hydraulic fracturing, fracking was not one of the petroleum exploration and development activities specifically named in the Scoping Document.⁴⁹ It is salutary for the Western Newfoundland SEA to consider a broad range of potential activities that may occur in the SEA Area, and to be as complete as possible, but submissions from the public to the SEA process might have been enhanced if fracking had been explicitly discussed from the beginning. As it is, the public presentation does refer to “oil and gas” activities but makes no mention of extraction via fracking being an option under consideration.⁵⁰ Any discussion of fracking in the public consultations was as a result of pre-existing community concerns and awareness of project proposals, and not information provided by the Board as being a potential future activity. The SEA notes that “[t]he presence of pock marks in the sediments of the Gulf indicates that some could be prone to liquefaction and slope failure,”⁵¹ suggesting that concerns about instability resulting from fracking or other drilling are well-founded, depending on other geological factors.

Recommendation: The Board should wait to issue any fracking permits until a more complete scientific understanding is available on the risks of fracking, including its impact on water quality. The results of any EA’s determinations about the suitability of fracking should also be aligned with the low risk tolerance outlined for particularly sensitive areas with high ecological, cultural, or economic value, reflecting the potential for certain risks being “unacceptable”. Further, risk and environmental assessments should take geological information into account in considering the potential dangers of fracking development.

10. Underlying Scientific Information and Gaps

Several comments throughout the draft SEA and in the summary of public consultations point to troubling changes in the Gulf, including a “trophic shift” whereby the equilibrium of species in the Gulf of St. Lawrence has been upset and species at higher trophic levels (e.g. large groundfish) are becoming less common. The Department of Fisheries and Oceans notes that:

“There have been dramatic shifts to both the northern and southern Gulf of St. Lawrence ecosystems, particularly in response to fishing and to a lesser extent changes in environmental conditions. These shifts include changes in species abundance and/or biomass and food web structure and functioning.

In the 1980s, these ecosystems were dominated by large groundfish predators including Atlantic Cod (*Gadus morhua*), Redfish (*Sebastes spp.*) and White Hake (*Urophycis tenuis*), and small-bodied forage species such as Capelin (*Mallotus villosus*), Mackerel (*Scomber scombrus*), Herring (*Clupea harengus*) and Northern Shrimp (*Pandalus borealis*). Today, small-bodied forage species dominate the northern and southern Gulf. [Despite there being little fishing for groundfish since the mid-1990s] the stocks have not recovered, leading scientists to conclude that

⁴⁹ C-NLOPB, “Strategic Environmental Assessment Update Western Newfoundland and Labrador Offshore Area Scoping Document” (December 21, 2011) online: C-NLOPB <<http://www.cnlopb.nl.ca/news/pdfs/westerndraftscopeen.pdf>>.

⁵⁰ C-NLOPB, “Western Newfoundland and Labrador Offshore Area Strategic Environmental Assessment Update” (October 23, 2012) online: C-NLOPB <<http://www.cnlopb.nl.ca/pdfs/wnlseaeen.pdf>>. [Public Consultations – Presentation]

⁵¹ Draft SEA, p. 87

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factors other than fishing must be responsible for the lack of recovery and ongoing declines in many groundfish populations.”⁵²

Locals have noticed other changes, according to the Consultation Report, such as changes in the spawning location and schedule of certain fish species, discussed at the Stephenville public meeting.⁵³ Such shifts could have a major impact on scheduling of any exploratory activities.

The draft SEA identifies a number of areas requiring further investigation to obtain specific information.⁵⁴ These include non-commercial species including zooplankton and bacterioplankton; the life histories of deep sea corals, Atlantic salmon, and the three wolffish species in the Gulf; and the distribution of eggs and larvae. Further, the SEA indicates that information is lacking on the “number and spatial and temporal distribution of avifauna offshore Newfoundland and Labrador and elsewhere in Eastern Canada” but notes that efforts are underway that will improve the availability of this information.⁵⁵

Another important gap relates to studies of EBSAs, where:

“several large areas of the Gulf were poorly sampled, leaving data gaps. So, at least, for the EGSL, the EBSAs do not necessarily cover all the areas or species that contribute in a significant way to the system. For example, it is important to keep in mind that only a small proportion (approximately 0.02%) of the benthic invertebrate species known to be present in the EGSL was considered in the EBSA process (Chabot et al 2007). In particular, the lack of data for the coastal zone (e.g. a portion of the west coast of Newfoundland) is considered to be an important information gap (Savenkoff et al 2007b).”⁵⁶

Listing and mapping of areas of high biological productivity and significance can support decision-making that protects these areas, and the SEA does identify a number of areas that are significant in the marine ecosystem and/or hold special importance for marine mammals. (p. 144; map on p. 134 – also p.286-87 for listing of CPAWS-identified Special Marine Areas; p. 288’s list of Ramsar sites; p.264’s list of Marine Mammal Significant Areas; the candidate National Marine Conservation Area discussed on p.274). However, it is not clear at this point how the existing data gaps are to be filled.

It is also not clear in the Draft SEA Update whether the coastal information gaps noted for Newfoundland also exist in other relevant areas such as the Magdalen Islands. Attention to coastal areas is important because of the many functions coastal areas fulfill, including of the high efficiency of eelgrass beds in sequestering carbon.⁵⁷ The description of estuarine habitats and particularly eelgrass beds does not

⁵² Department of Fisheries and Oceans, “Ecosystem Shifts” in *Canada’s State of the Oceans Report, 2012* (2012) online: Department of Fisheries and Oceans, <<http://www.dfo-mpo.gc.ca/science/coe-cde/soto/report-rapport-2012/index-eng.asp#a1>>.

⁵³ Consultation Report, p. 17. Draft SEA, p. 401.

⁵⁴ Draft SEA, p. 400-401.

⁵⁵ Draft SEA, p. 414.

⁵⁶ Draft SEA Update, p. 133.

⁵⁷ Colin R Campbell, *Blue Carbon – British Columbia: The Case for the Conservation and Enhancement of Estuarine Processes and Sediments in BC* (2010) online: Sierra Club BC <http://www.sierraclub.bc.ca/publications/scbc-reports/Blue%20carbon%20bc%20report%20final_web.pdf>.

include information on the carbon sequestration potential of these ecosystems, or on their sensitivity to various types of contamination and damage that could result from oil and gas exploration.

Often, the Draft SEA Update simply summarizes earlier SEA work⁵⁸ without identifying how further scientific work will be carried out and incorporated. These gaps are substantial, and can only be closed with further research. More information is required on how the Board intends to ensure this data is continually collected. There are indications that leaving such study for industry to perform is insufficient. For example, a recent study measured avian associations with platforms on the Grand Banks to determine the level of monitoring needed to assess oil and gas risks to marine birds. Self-reporting by industry observers was flagged as a barrier to transparency, unbiased scientific inquiry, and adequate environmental protection.⁵⁹

The Board should also demonstrate how it would stage or schedule resource exploitation decisions in order to take new information into account and minimize harm to ecosystems in the identified areas of high biological productivity and significance. The Draft SEA Update identifies a lack of understanding of the effects of seismic testing on marine animals and the actual efficacy of many mitigation measures commonly assumed by the industry to be adequate, including ramp-up procedures for seismic testing.⁶⁰ Development decisions must be supported by up-to-date, comprehensive scientific information, or further development could risk irreversible effects on the already-changing Gulf. If the Board fails to seek this information, it cannot reasonably determine that a project carried out on federal lands is “not likely to cause significant adverse environmental effects”,⁶¹ or that any such effects are “justified in the circumstances”,⁶² before issuing permits to new exploration projects.

Recommendation: before authorizing any exploratory activity, sufficient independent studies should be completed, providing insight on the nature, causes, and effects of the shift that seems to be occurring in the Gulf of Saint Lawrence, as well as the background biological conditions in the Gulf. As our December submission pointed out, there is little ecological space in the Gulf for additional industrial activity, in view of the stresses already placed on certain Gulf species as a result of climate change, fishing, invasive species, and pollution.

Recommendation: once identification of sensitive and valuable natural areas is complete, and the necessary data is collected to fill remaining information gaps, the Board should commit to authorizing projects *only* if the proponent can demonstrate that the risk to these areas is as low as practicable. Improved information should be collected about the effects of exploration activities and the effectiveness of mitigation measures for routine exploration activities.

11. The Environmental Impact of Chemical Dispersants

⁵⁸ E.g. Draft SEA Update, p. 402-407.

⁵⁹ CM Burke, WA Montevicchi and FK Wiese, “Inadequate Environmental Monitoring around Offshore Oil and Gas Platforms on the Grand Banks of Eastern Canada: Are Risks to Marine Birds Known?” (2012) 104 *Journal of Environmental Management* 121.

⁶⁰ Draft SEA, p. 401.

⁶¹ *Canadian Environmental Assessment Act*, 2012 SC 2012 c 19 s 67(a).

⁶² *Ibid* s 67(b).

The list of sections that apparently discuss the use of oil spill dispersants and their potential effects (ss. 3.1, 3.2, 5.1, 5.2, 5.3, 5.4, 5.5)⁶³ is misleading, as most of these sections refer simply to “accidental” spills of oil and other substances, and only peripherally to the deliberate application of dispersants. Dispersants are not deployed “accidentally” but also should not be considered as a routine or unremarkable part of oil spill cleanup operations.

The effects of dispersants (while we acknowledge that these are still under study) should be more fully explored in the SEA, as much information is becoming available on the effects of these substances in the aftermath of the extensive use of chemicals to disperse the Deepwater Horizon spill. Studies have shown that dispersants can allow toxins to accumulate in the food web; oil broken up by dispersant damages the insulating properties of seabirds’ feathers more than untreated oil, making the birds more susceptible to hypothermia and death; and that dispersed oil is toxic to fish eggs, larvae, and adults as well as to corals, and can harm sea turtles’ ability to breathe and digest food.⁶⁴ Some studies have found that chemical dispersants exhibit synergistic toxicity when combined with oil.⁶⁵ A recent study found that the chemical dispersant COREXIT (used in the Deepwater Horizon spill increases the toxicity of oil by a factor of 52.⁶⁶ The temperature regime, biodiversity, and oceanographic processes at work in the Gulf of St. Lawrence are likely somewhat different than those in the Gulf of Mexico, but there is a pressing need to acquire the best available information on the impact that chemical dispersants might have on the Gulf of St. Lawrence.

One instructive example comes from the United States: conservation groups sued the EPA and Coast Guard, alleging that California’s plan for the use of dispersants violated the *Endangered Species Act*. A 2013 settlement agreement resulting from this litigation obliges the United States government to analyze the effects of oil dispersants before use to determine whether the dispersants would harm endangered species. The EPA and Coast Guard must consult with experts from the National Marine Fisheries Service and the Fish & Wildlife Service before January 2014, and consider six specific studies arising out of the Deepwater Horizon spill.⁶⁷

Recommendation: The Board should clarify that it does not consider dispersants to be either a “routine” remediation measure for spills or an “accidental” release, and should also clarify to the public the procedures and criteria by which companies can obtain authorization for the use of chemical dispersants as part of a spill response. The approach to the use of dispersants should be precautionary, including analysis of potential harm to endangered species and the impacts of toxicity to creatures that form the basis of the food chains in their area.

⁶³ Draft SEA Update, p. 19.

⁶⁴ Center for Biological Diversity, “Dispersants” (not dated) www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_development/oil_and_gas/gulf_oil_spill/dispersants.html.

⁶⁵ S.E. Hook and H.L. Osborn, “Comparison of toxicity and transcriptomic profiles in a diatom exposed to oil, dispersants, dispersed oil” (2012) *Aquatic Toxicology*, 124–125.

⁶⁶ R Rico-Martinez, TW Snell and TL Shearer, “Synergistic toxicity of Macondo crude oil and dispersant Corexit 9500A® to the *Brachionus plicatilis* species complex (*Rotifera*)” (2013) 173 *Environmental Pollution* 5.

⁶⁷ *Center for Biological Diversity, Surfrider Foundation, and Pacific Environment v Environmental Protection Agency and Coast Guard* (Northern District California, San Francisco Division, 2013) (Settlement agreement). Online:

<https://dl.dropboxusercontent.com/u/2494842/LEGAL/%20Oil%20dispersant%20suit%20settlement%20agreement.pdf> .

Recommendation: Scientific work should continue to study the impact of the most likely candidate dispersants in the Gulf of St. Lawrence on key species occurring in the Gulf, as there is evidence to suggest that the impact of dispersants on marine life can be severe. The SEA Update should include references to this new information, and should discuss the procedures for obtaining permission to use dispersants.

12. Accounting for Climate Change

In determining the environmental impacts of oil and gas exploration and production in the Gulf of St. Lawrence, EAs and subsequent permitting decisions should consider the impacts of climate change on ecosystems in the Gulf. Oil and gas exploration presents additional and cumulative risks which must be considered. Climate change presents a number of risks for the Gulf of St. Lawrence, including potentially more challenging project conditions as a result of changing distributions of sea ice and the potential for more extreme weather. The Department of Fisheries and Oceans states that “Ice-free winters are likely to occur more regularly due to climate change” but that “interannual variability will likely ensure there will be sea ice present during many winters over the next few decades.”⁶⁸ Further, the release of GHGs has global impacts as well as impacts in the Gulf and the SEA Area. These factors all weigh against the approval of exploration projects.

Recommendation: Any EA proceeding in the SEA Area or with the potential to affect the SEA Area should include the most accurate and up-to-date information possible on climate change’s current and potential effects on the Gulf. These processes should undertake to fill gaps in scientific understanding *before* issuing permits, in accordance with the precautionary principle. The SEA’s recommendations should also make it clear that the potential for oil and gas projects to contribute to the release of greenhouse gases, exacerbating global climate change, weighs against the approval of oil and gas projects or at least requires substantial mitigation measures.

13. Conclusions

In this document we have discussed a number of issues that must be addressed if oil and gas exploration is to proceed with public acceptance and full knowledge of the risks. We invite the Board to put all of these steps and recommendations into action, since we believe that these recommendations represent an appropriate risk framework, and will help to bridge gaps in information and in social license to operate. Decisions about whether or not to develop oil and gas in the Gulf of Saint Lawrence are *social* decisions, and the input of the public should be regarded as a benefit. We look forward to reading and providing input to the C-NLOPB’s eventual recommendations regarding oil and gas development in this region.

⁶⁸ Department of Fisheries and Oceans, “Sea Ice Variability” in *Canada’s State of the Oceans Report, 2012* (2012) online: Department of Fisheries and Oceans <<http://www.dfo-mpo.gc.ca/science/coe-cde/soto/report-rapport-2012/index-eng.asp#a4>>.