

REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF NEWFOUNDLAND AND LABRADOR Technical Advisory Group (TAG) Sessions, September 2019: <i>Cumulative Effects</i> Engagement Activity / Meeting Notes Finalized: October 28, 2019		
Date and Time / Duration	Friday, September 13, 2019 9:30 a.m. – 12:30 p.m. NDT	
Location	Conference Centre, Memorial University's Signal Hill Campus, St. John's, NL	
Organization(s)	<ul style="list-style-type: none"> • Association of Seafood Producers (ASP) • BP • BHP • Canada-Nova Scotia Offshore Petroleum Board (C-NSOPB) • Canadian Association of Petroleum Producers (CAPP) • Chevron • East Coast Environmental Law (ECE Law) • Ecology Action Centre (EAC) • Edgewise Environmental / Newfoundland and Labrador Environmental Industry Association (NEIA) • eDNAtec Ltd. • Environment and Climate Change Canada (ECCC) • First Nations of Quebec and Labrador Sustainable Development Institute (FNQLSDI) / l'Institut de développement durable des Premières Nations du Québec et du Labrador (IDDPNQL) • Fisheries and Oceans Canada (DFO) • Fish, Food and Allied Workers – Unifor (FFAW-Unifor) • Health Canada • Husky Energy • Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) • Miawpukek First Nation • Mi'kmaw Conservation Group (MCG) • Natural Resources Canada (NRCan) • Newfoundland and Labrador Wildlife Foundation (NLWF) • Nunatisavut Government • NunatuKavut Community Council (NCC) • Oceans North • PGS • Sierra Club Canada Foundation • Suncor • Transport Canada • Wolastoqey Nation in New Brunswick (WNNB) • World Wildlife Fund-Canada (WWF-Canada) 	
Participants (External)	<u>In-person:</u> Steve Bettles, Husky Energy Andrew Bouzan, NLWF Renae Butler, ASP	<u>Video/teleconference:</u> Stephanie Avery-Gomm, ECCC Joseph Beland, MCG Mark Brooks, WWF-Canada

REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF NEWFOUNDLAND AND LABRADOR

Technical Advisory Group (TAG) Sessions, September 2019: *Cumulative Effects*

Engagement Activity / Meeting Notes

Finalized: October 28, 2019

	<p>Richard Davis, BHP Julie Diamond, DFO Maximilien Genest, NRCan Ross Hinks, Miawpukek First Nation Geoff Hurley, CAPP Kim Keats, DFO Robyn Lee, FFAW-Unifor Jason Norman, PGS Ashley Noseworthy, Edgewise/NEIA Derek Peters, KMKNO David Pinsent, Suncor Mark Ploughman, eDNatec Julie Reimer, Sierra Club Sara Rumbolt, Health Canada Dr. Sabina Wilhelm, ECCC</p>	<p>Kate Cavallaro, ECCC Dr. Colin Curry, WNNB Dr. Heather Dettman, NRCan Jason Flanagan, Transport Canada Susanna Fuller, Oceans North Michelle Gilders, Chevron Gordon Grey, WNNB Michael Hingston, ECCC Mike Kofahl, ECE Law Maarten Kuijper, BP Keith MacMaster, EAC Jennifer Matthews, CAPP Janice Ray, C-NSOPB George Russell, NCC Claude Sheppard, Nunatsiavut Government Jordy Thomson, EAC Laura Wright, C-NSOPB Sarah Zammit, FNQLSDI/IDDPNQL</p>
<p>Participants (Internal)</p>	<p><u>Committee Members:</u> Gerald Anderson Garth Bangay Wes Foote Maureen Murphy Rustad Dr. Keith Storey</p>	<p><u>Regional Assessment Task Team:</u> <i>Impact Assessment Agency of Canada</i> Dr. Steve Bonnell Virginia Crawford Erin Stapleton</p> <p><i>Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)</i> Melissa Moss Darren Hicks</p>
<p>Record of Discussion</p>	<p>General approach</p> <ol style="list-style-type: none"> 1. It was suggested the Committee take an ecosystems-based approach, focusing on productivity and overall status of marine food web, rather than getting into specific species selection. The Committee said taking this approach has its own challenges, but whatever the Committee does has to be based on science. Much of the data collected/provided to date is species / component specific. The Task Team clarified that the Regional Assessment will not, based on resources and time, be building an “ecosystem model” of the study area or modelling overall ecosystem response to effects. The Regional Assessment is not a large-scale ecological model, and modelling of disturbances (e.g., underwater noise or drill cuttings) and modelling of effects are not the same thing 2. The Task Team confirmed that Valued Components (VCs) have been identified, but the treatment of each remains to be determined. The intention is to focus on species of special concern/indicator species (e.g., Leach’s storm petrel) where applicable. ECCC noted the cause of decline in Leach’s storm petrel is not well 	

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF
NEWFOUNDLAND AND LABRADOR**

Technical Advisory Group (TAG) Sessions, September 2019: *Cumulative Effects*

Engagement Activity / Meeting Notes

Finalized: October 28, 2019

understood, but it's not one specific factor (i.e., not only oil and gas development) – it's the result of cumulative effects (hence the importance of cumulative effects assessment).

3. It was suggested that the Regional Assessment could determine when and where cumulative effects are less important and more important, and to scope out areas or issues.
4. It was suggested that the Committee should also look at allocation of ocean space for exploratory drilling, and that identification of areas to be avoided is equally important.

Scope of Regional Assessment and cumulative effects assessment

1. The Committee clarified that the Regional Assessment is for exploration drilling and related activity, which includes wellsite surveys, VSP, support and supply vessels. The seismic acquisition component will be included in the cumulative effects assessment.
2. It was noted by several participants that the Regional Assessment is an opportunity for a more comprehensive cumulative effects assessment that isn't possible in project-specific environmental assessment and decision-making.

Potential sources of cumulative effects

1. The Committee clarified that the inherently dynamic nature of the marine environment, including the continued influence of climate change and other such factors, are being considered and addressed in the Regional Assessment. Their question to participants is *how* should these factors be considered and addressed.
2. It was noted that results of environmental effects monitoring (EEM) programs (carried out by industry over many years) point to a localized effect of drilling and waste emissions.
3. For oil spills, NRCan noted there is new research focusing on analytics of petroleum in water, improving understanding. As new information is made available, it can be used to develop better models and potentially new mitigations.
4. Related to oil spills is concern regarding bioaccumulation/magnification in species consumed by humans and potential impact to human health.
5. There is concern that chronic leaks from platforms are not reported and the cumulative effects of many small spills is therefore unknown and cannot be determined. A participant noted studies from Alaska and the Gulf of Mexico which found that small spills and leaks are higher than reported.
6. Another participant stated that all spills and leaks are reported to the exact amount, as required by the regulator, and reports are publicly-available. There are authorized discharges, which have regulatory limits (15 ppm for bilge) and are reported daily. Discharges above limits are considered an unauthorized discharge. Another participant added that the problem of chronic leaks is trivial in comparison to natural leaks, which are extensive and not well-understood. There was reference to the Government of Canada's Integrated Satellite Tracking of

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF
NEWFOUNDLAND AND LABRADOR**

Technical Advisory Group (TAG) Sessions, September 2019: *Cumulative Effects*

Engagement Activity / Meeting Notes

Finalized: October 28, 2019

Pollution (ISTOP) program as a source for leak data for use in the Regional Assessment.

7. It was suggested that the Committee look at how climate change has been considered in past environmental assessments. The burden of proof should be on the proponents in terms of implications of their activities for climate change.
8. Cumulative effects of noise and vessel strikes on marine mammals should be considered in the Regional Assessment.
9. Cumulative effects of underwater noise is an important consideration. One participant referenced a noise monitoring study off Sable platform (Nova Scotia) where results showed that drill noise was masked largely by nearby standby vessels. Another participant referred to a two-year study done by Jasco through the ESRF program that should be considered in the Regional Assessment. A participant noted that while noise from exploratory drilling is marginal, the cumulative effects assessment of the region needs to consider noise from all sources (e.g., seismic, shipping, etc.). It was also suggested that the Committee could make recommendations around what would be required at the project level for collection of underwater noise data. DFO mentioned they are participating in a number of studies on soundscapes and are also looking into the effects of noise.
10. Cumulative effect of light must be considered in the Regional Assessment. New light sources in a dark environment could potentially have more of an effect on seabirds than a new light source in an already-lit area.

Establishing baseline

1. It is important that the Regional Assessment be clear regarding what information was considered in establishing the baseline.
2. Indigenous Knowledge and local knowledge are important contributions to the baseline.
3. Some participants suggest the “current state” isn’t necessarily the appropriate baseline. For example, it was suggested that the baseline scenario for light should be pre-oil and gas development (e.g., dark), as development was not there 20 years ago. It was also mentioned how climate change has been and continues to affect the baseline – how can this be factored into the cumulative effects assessment? Other participants suggest that the baseline be the existing conditions at time of the assessment, as going back to pre-industry would not adequately reflect current conditions (e.g., species at risk) nor is this practical to do. The Committee confirmed that the past activities and conditions will be considered for the baseline.

Data gaps and precautionary principle

1. The Committee was advised to take a precautionary approach for those areas where the science is lacking (in terms of baseline or effects) and asked how this uncertainty would be handled in the Regional Assessment. The Committee acknowledged that there are portions of the Study Area for which data is limited.

REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF NEWFOUNDLAND AND LABRADOR

Technical Advisory Group (TAG) Sessions, September 2019: *Cumulative Effects*

Engagement Activity / Meeting Notes

Finalized: October 28, 2019

- It is possible that the Committee may indicate that until there is adequate data in some areas, it is unable to make conclusions or recommendations for those areas.
2. Atlantic salmon is an important species for Indigenous groups and baseline data is sorely lacking (e.g., a report from the 1990s is still being referenced). CAPP noted that the ESRF issued a Call for Expressions of Interest (which closed September 1, 2019) for studies to look at the presence/absence of Atlantic salmon in the offshore and potential effects. This is priority area for CAPP, and hopefully results can be incorporated into the Regional Assessment.
 3. A participant asked if there is an opportunity for organizations to assist in drafting text around precautionary approaches for inclusion in the Regional Assessment.
 4. Other participants cautioned against statements around lack of data, and pointed to EEM program data as providing a wealth of information gathered over 20 years that is being overlooked. All effects measured have been within those estimated in the environmental assessments. The EEM program is a “mini cumulative effects assessment” for production drilling, which could be used by the Committee to assess cumulative effects. It was clarified that EEM at development fields is funded by the operator (approximately \$1 million every 2 years) and is a condition of approval. All reports are publicly available on the CNLOPB website.

Development scenarios

1. It is important that the Regional Assessment present a clear methodology on developing and using scenarios of future offshore activity.
2. It was suggested that a map could be created to identify the different stressors (e.g., light, noise) that would identify the stressor footprint in current and future development scenarios (e.g., what percentage does vessel traffic, oil and gas development, etc. contribute to the overall impact?).
3. For potential future scenarios, it was suggested the Committee look at densities in other jurisdictions to get a sense of what is possible, especially in areas where industry has been ongoing for longer.
4. It was suggested that the Government of Newfoundland and Labrador target of 100 wells by 2030 should be considered, in consideration of the likely level or future offshore drilling and the associated temporal and spatial scales. The Committee has been working with the C-NLOPB on developing these well scenarios based on what is currently known (e.g., licenses issued from calls for bids, historical drilling statistics, etc.). The cumulative effects assessment will consider how we expect those wells to arise over space and time, interact together, and interact with other elements.
5. It was noted that while marine plastics may not be top of mind right now, that plastics pollution is increasing and will become an issue over time given the interconnectedness of our oceans.

Cumulative effects management

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF
NEWFOUNDLAND AND LABRADOR**

Technical Advisory Group (TAG) Sessions, September 2019: *Cumulative Effects*

Engagement Activity / Meeting Notes

Finalized: October 28, 2019

1. A participant asked how cumulative effects will be managed and monitored (e.g., is a proponent held to certain limit/threshold/percentage of the cumulative impact?), and if/how thresholds would be established and monitored.
2. It is important to understand that this is a study happening today and things will change. There needs to be a regular re-evaluation of the recommendations (e.g., revisit every couple of years).
3. A participant referenced a 2009 CCME guidance document that provides a framework for cumulative effects management, and encouraged the Committee to make recommendations regarding adaptive management.

GIS Platform

1. Light pollution maps are available online and should be included in the GIS system.
2. A participant suggested that the Committee put out a call to interested parties for data to support the cumulative effects assessment and Regional Assessment. The Committee confirmed that they have been and continue to work with various agencies to gather applicable data and invite all participants to suggest data sources for inclusion in the cumulative effects assessment and the Regional Assessment. DFO mentioned they are one of the agencies working with the Task Team and the Committee to make available the data that can be shared.
3. A participant noted that there are tools/methodology to create a cumulative effects assessment layer for inclusion in a GIS, and asked if the Committee will be doing so. The Committee is uncertain at this point if a specific cumulative effects assessment layer will be in the GIS; however, cumulative effects will at least be addressed in the text portion of the GIS tool.
4. The Committee confirmed that the Regional Assessment report will be designed to be a "living document" and that the GIS tool will be updated regularly, and will be making recommendations accordingly, including allocation of adequate resources to ensure it remains useful.
5. Participants asked where the platform would be housed. The Committee replied that it wants to hear the opinions/suggestions from the participants on where the tool should be housed. A participant expressed concern that housing of the system was currently unknown, especially since DFO maintains much of the data applicable to the Regional Assessment. The Committee clarified that DFO and other agencies collect data for their own specific purposes, and the Regional Assessment is aggregating applicable data from various agencies and other sources.

Timeline

1. It was observed that a 3-hour discussion was inadequate for such a complex topic and more discussion is warranted to ensure the effectiveness of the Regional Assessment.
2. There is concern that the current deadline does not give adequate time to conduct a comprehensive cumulative effects assessment, nor to produce a quality

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF
NEWFOUNDLAND AND LABRADOR**

Technical Advisory Group (TAG) Sessions, September 2019: *Cumulative Effects*

Engagement Activity / Meeting Notes

Finalized: October 28, 2019

	Regional Assessment report/product. The Committee replied that “getting it right” is more important to them than timeline.
Follow-up / Action Items	1. Task team to send presentation on cumulative effects to all participants. ACTION COMPLETE.
Prepared By:	Erin Stapleton, Virginia Crawford, Melissa Moss