REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF NEWFOUNDLAND AND LABRADOR
Technical Advisory Group (TAG) Sessions, September 2019: *Marine Fish and Fish Habitat*
Engagement Activity / Meeting Notes
Finalized: October 28, 2019

Date and Time / Duration	Monday, September 16, 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)	• Association of Seafood Producers (ASP) • Atlantic Groundfish Council • Atlantic Policy Congress (APC) • Canada-Nova Scotia Offshore Petroleum Board (C-NSOPB) • Canadian Association of Petroleum Producers (CAPP) • Department of Fisheries and Land Resources, Government of Newfoundland and Labrador (FLR) • East Coast Environmental Law (ECE Law) • Ecology Action Centre (EAC) • Edgewise Environmental / Newfoundland and Labrador Environmental Industry Association (NEIA) • Exxon-Mobil • Fisheries and Oceans Canada (DFO) • Fish, Food and Allied Workers – Unifor (FFAW-Unifor) • Husky Energy • Miawpukek First Nation • Mi'gmawei Mawiomi Secretariat (MMS) • Newfoundland and Labrador Wildlife Federation (NLWF) • NunatuKavut Community Council (NCC) • Ocean Choice International (OCI) • Oceans North • PGS • Suncor • World Wildlife Fund Canada (WWF-Canada)	
Participants (External)	<u>In-person:</u> Steve Bettles, Husky Energy Andrew Bouzan, NLWF Renae Butler, ASP Julie Diamond, DFO Elisabeth DeBlois, CAPP Mitch Downton, APC Rick Ellis, OCI Bob Gregory, DFO Ross Hinks, Miawpukek First Nation Kim Keats, DFO	<u>Video/teleconference:</u> Amanda Barnaby, MMS Susanna Fuller, Oceans North Mike Kofahl, ECE Law Keith MacMaster, EAC Jennifer Matthews, CAPP Stanley Oliver, NCC Janice Ray, C-NSOPB Bobbi Rees, FLR Sarah Saunders, WWF-Canada Claude Sheppard, Nunatsiavut Government

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	Robyn Lee, FFAW-Unifor Charlie Marshall, APC Jason Norman, PGS Ashley Noseworthy, Edgewise/NEIA Dave Pinsent, Suncor George Russell, NCC Nadine Wells, DFO	Jordy Thomson, EAC Kris Vascotto, Atlantic Groundfish Council Laura Wright, C-NSOPB
Participants (Internal)	<u>Committee Members:</u> Gerald Anderson Garth Bangay Wes Foote Maureen Murphy Rustad Dr. Keith Storey	<u>Regional Assessment Task Team:</u> *Impact Assessment Agency of Canada* Virginia Crawford Erin Stapleton Tonya Warren *Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)* Melissa Moss Ian Murphy
Record of Discussion	**Key information and datasets** 1. Indigenous knowledge on fish and fish habitat should be incorporated into the Regional Assessment. Heathy marine ecosystems are important to Indigenous communities and it is important they are engaged to share science throughout the process. 2. Environmental effects monitoring (EEM) programs currently being carried out for production projects may be relevant to the Regional Assessment. Data is collected on water quality, sediment and biota. While they do deal with production, they would be important datasets to include. The Regional Assessment needs to take a hard look at the EEM data and determine to what extent it can be used to accurately depict effects over a larger area. 3. There are some studies internationally that deal with exploration (e.g., Coast of Brazil, Alaska) that could be considered. 4. With respect to marine mammal data, Dr. Jack Lawson of DFO is working on developing information regarding distribution of cetacean species. 5. Dr. Garry Stenson of DFO has not been officially engaged with Committee to date, but will be providing information on hooded seals. 6. DFO researchers are collecting data on sharks (telemetry data), but the data is not published. DFO is unsure if it will be ready for first version of the Regional Assessment but it could possibly be incorporated in a future version. 7. DFO cautioned that only experienced scientists should be working with the research vessel data. DFO has seen incorrect/improper use and misinterpretation by those less experienced with the data. 8. DFO is working with the Task Team on how best to use the Atlantic Zone Monitoring Data Set for the Regional Assessment.	

9. DFO advised that invertebrate data, which it has never been curated and was not the focus of effort in the past, is now being curated to ensure the data could be used. The data may not be ready for use in the first version of the Regional Assessment but could possibly be incorporated in a future version.
10. DFO is conducting a review in January of coral and sponge data to ensure that species identifications are as accurate as possible. Dataset likely does provide good information of presence/absence, but it's only as good as where trawling occurs. There are a lot of habitats DFO cannot survey because of depths, so the data is limited to presence/absence for areas surveyed.
11. DFO has completed a lot of work on Ecologically and Biologically Significant Areas (EBSAs), identified using every piece of data available to DFO. EBSAs are being considered in the Regional Assessment.
12. DFO sits at the NAFO table, but DFO is unable to speak on behalf NAFO. However DFO has been supporting the Task team in obtaining NAFO data.
13. A participant suggested that where DFO/scientific data may be lacking, historical, traditional and local knowledge can help address those gaps. Another participant spoke to the importance of science-based data.
14. A participant noted sampling results are a matter of contact rates vs. catchability. When we consider the impact of sampling, we are not sampling well, which indicates the need to have a more precautionary perspective. The participant recommend putting a terrestrial lens on data collection. Another participant added these surveys are just a snapshot in time.
15. A participant said that in their review of recent environmental assessment, they noticed that historic fishery footprint was not taken into account. Historical fisheries data should be considered in the Regional Assessment.
16. It was suggested that consideration of abiotic factors was missing from the discussion, and that a description of the physical environment be included in the Regional Assessment.
17. Underlying sediment assessments would indicate whether there would be corals present. Further conversation needs to occur with DFO Science on what can be included in the Regional Assessment in this regard. There is not a lot of information on sediment type for the whole study area, but some modelling is being done by PhD students (not yet published but may be used in future versions of the Regional Assessment). DFO also noted there are a lot of soft bodied coral that would be present in sediments, and not to focus on just hard bodied corals. DFO has provided coral data to the Task Team for use in the Regional Assessment.

Particularly important and/or sensitive aspects of marine fish and fish habitat

1. While spawning locations of commercial species is collected, DFO is unsure if is available spatially. This would require direct conversation each species-specific expert at DFO. The fishing industry would like operators to have knowledge of spawning areas before meeting, and not having that information beforehand is a point of frustration.
2. It was suggested that information on spawning locations can be obtained from

the harvesters directly and this local knowledge can be incorporated into the Regional Assessment.

3. A participant felt that, with respect to the NAFO fisheries closure areas, there is a lack of data and there has been limited research on the impacts of exploration drilling.
4. DFO Science has identified Significant Benthic Areas (SBAs). SBAs are ecologically and biologically significant cold-water coral or sponge-dominated regional habitats. Within these areas, Sensitive Benthic Areas (SeBAs, not to be confused with SBAs) are defined based on their exposure to proposed or ongoing fishing activities.
5. Vulnerable Marine Ecosystem (VME) habitat is delineated by NAFO scientists. They determine whether to close these areas to fisheries. VME Closures are not the entirety of the VME habitat.
6. Areas of high importance for corals and sponges have been mapped to the best of DFOs ability at this point.
7. There are some species for which critical habitat have been identified (e.g., Northern and Spotted Wolffish). Processes are still underway to identify critical habitat for some species (e.g., Leatherback Turtle), but the best available information should be considered in the Regional Assessment.
8. It is concerning that exploratory drilling would be permitted to proceed while areas have been closed to fishing.

Potential interactions

1. There is concern regarding effects on sensitive areas / Special Areas. There has not been much research published on potential impacts.
2. The Regional Assessment should consider the long-term effects on the abiotic environment (e.g., dispersion, low level discharge of oil reducing dissolved oxygen, etc.).
3. The impacts of underwater noise on fish is a concern, and more research is required to gain a better understanding of potential interactions.
4. One of DFO's biggest concerns is cumulative impact of exploration wells on the benthic environment, and the impacts of noise. There is so much uncertainty when it comes to cumulative effects, and the precautionary approach should be applied.
5. A participant stated that EEM programs are showing no significant impacts of 40 production wells within a small area. The programs are funded by the operator, approximately $1 million every two years. Reports generated are available on C-NLOPB and Operator webpages. Reports are also reviewed by ECCC and DFO. Another participant said that while the study areas for the EEM programs are small, they do provide some thresholds for impacts of drilling a well, which could be applied in the Regional Assessment. Modelling done for exploration environmental assessments could be extrapolated to other areas within the Regional Assessment study area to quantify footprints.
6. DFO cautioned that while it does review EEM programs and agree there is

valuable information in the reports, the data is fairly localized. DFO recommends the Committee be very cautious of the transferability of localized studies to the Regional Assessment study area, as there is still is a lot we don't know about the marine environment and species' habitats, and further offshore we know virtually nothing. For example, the effects of deposition may be more long term than previously thought (e.g. while it may not be toxic, fish species may avoid using areas of deposition). The Committee was advised to lean heavily on expertise of the DFO scientists.

7. It was re-iterated that EEM programs are specifically designed to monitor the interaction of the oil and gas industry and marine environment. It may not be completely transferrable, but should not be rejected from consideration in the Regional Assessment. The EEM programs here are the largest in the world. Also re-iterated were concerns regarding extrapolation of EEM data to the entire Regional Assessment study area.
8. A participant advised that if we don't have good surveys on potential impacts, we will not know full breath of impacts when things go wrong. ECCC and DFO review EEM program design. DFO suggested the Committee could make recommendations around future EEM methodologies, noting that we don't want to be too prescriptive in specific methodologies, or software packages, but could be more aligned. Another participant added that perhaps there could be monitoring of species not currently done in the EEM programs.
9. A participant said that there is a large body of work internationally regarding the potential impacts of exploratory drilling on the marine environment, which should be considered by the Committee.
10. Transboundary issues are a concern. A large portion of the Regional Assessment study area is outside the EEZ. Regulatory experts for that area need to be consulted.

Existing and additional mitigation and follow-up requirements

1. There was a recent condition that required the proponent to do a pre-drill benthic survey at every wellsite. That information is provided to the C-NLOPB and DFO. There is a requirement for follow-up for the first well, and for any areas within sensitive areas (e.g. NAFO Closure areas).
2. A participant noted that, from their perspective, the current mitigation measures in place are effective.
3. A participant noted that the Statement of Canadian Practice relates particularly to marine mammals, and there may be other mitigations related to impact to fish that should be considered. DFO has started a Canadian Scientific Advisory Secretariat (CSAS) process to potentially update that guidance. Limited information on effects to fish was identified in that session. Until data/ information is published, it cannot be shared.
4. There needs to be mitigation measures in place to avoid areas that are being actively fished. Some proponents have asked when fishing is occurring and others have not.

	5. DFO noted that the CSAS session in January on the effect of exploratory drilling on corals and sponges will hopefully generate guidelines. Further mechanisms must be considered to ensure that DFO scientists are effectively engaged in the development of the Regional Assessment and its ongoing evolution. This will require additional resources.
Follow-up / Action Items	
Prepared By:	Erin Stapleton, Virginia Crawford, Melissa Moss