

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING  
EAST OF NEWFOUNDLAND AND LABRADOR  
Technical Advisory Group (TAG) Session on *Marine Fish and Fish Habitat*  
September 16, 2019  
QUESTIONS AND ITEMS FOR DISCUSSION  
PARTICIPANT INPUT FORM**

**Name and Affiliation: CAPP**

**1) Key information and datasets**

- a) Do you have any suggestions for marine fish and fish habitat related datasets and information sources that should be considered in the Regional Assessment?
- b) Do you have any suggestions for the analysis, use and presentation of marine fish and fish habitat data in the Regional Assessment?

Grand Banks Environment Effects Monitoring programs assess the effects of development drilling. These effects can reasonably be assumed to be larger than those of exploration drilling. Although covering a smaller geographic area than that of the RA, results are applicable to areas of the RA with similar bottom types. All these documents can be accessed at <https://www.cnlopb.ca/environment/projects/>. Results from Terra Nova have also been published in the primary literature. In addition to these, there have been large scale studies on the effects of exploration drilling off the coast of Brazil and off the coast of Alaska. References to these and to the Terra Nova publications are provided below. We judge that these are the most relevant field studies for the present RA. However, this is not an exhaustive list of material available on effects of offshore drilling. Additional references can be provided as needed.

**References:**

**Reports**

Grand Banks EEM Programs -<https://www.cnlopb.ca/environment/projects/>

**Publications**

Corrêa, I.C.S., E.E. Toldo Jr. and F.A.L. Toledo. 2009. Seafloor geological impacts associated with drilling disturbance. *Deep-Sea Res. II*: 4-11.

DeBlois, E.M., E. Tracy, G.G. Janes, R.D. Crowley, T.A. Wells, U.P., Williams, M.D. Paine, A. Mathieu and B.W. Kilgour. 2014. Environmental Effects Monitoring at the Terra Nova Offshore oil development (Newfoundland, Canada): Program Design and Overview. *Deep-Sea Res. II*, 110: 4-12.

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DeBlois, E.M., M.D. Paine, B.W. Kilgour, E. Tracy, R.D. Crowley, U.P. Williams and G.G. Janes. 2014b. Alterations in Bottom Sediment Physical and Chemical Characteristics at the Terra Nova Offshore Oil Development over Ten Years of Drilling on the Grand Banks of Newfoundland, Canada. *Deep-Sea Research II*, 110: 13-25.

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Neff, J., K. Lee, E.M. DeBlois and G.G. Janes. 2014. Environmental Effects of Offshore Drilling in a Cold Ecosystem: A 10-year Monitoring Program at the Terra Nova Offshore Oil Development off the Canadian East Coast. *Deep-Sea Research Part II*. Volume 110.

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Paine, M.D., E.M. DeBlois, B.W. Kilgour, E. Tracy, P. Pocklington, R. Crowley, U. Williams and G.G. Janes. 2014. Effects of the Terra Nova Offshore Oil Development on Benthic Macro-invertebrates over 10 Years of Development Drilling on the Grand Banks of Newfoundland, Canada. *Deep-Sea Research II*, 110: 38-64.

Peralba, M.C.R., D. Pozebon, J.H.Z. Santos, S.M. Maia, T.M. Pizzolato and G. Cioccarri. 2010. Metal and hydrocarbon behavior in sediments from Brazilian shallow waters drilling activities using nonaqueous drilling fluids (NAFs). *Environ. Monit. Assess.* 167: 33-47.

Pozebon, D., J.H.Z. Santos, M.C.R. Peralda, S.M. Maia, S. Barrionuevo and T.M. Pizzolato. 2009. Metals, arsenic and hydrocarbon monitoring in marine sediment during drilling activity using NAFs. *Deep-Sea Res. II* 56: 22-31.

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Trefry, J.H., K.H. Dunton, R.P. Trocine, S.V. Schonberg, N.D. McTigue, E.S. Hersh and T.J. McDonald. 2013. Chemical and biological assessment of two offshore drilling sites in the Alaskan Arctic. *Mar. Environ. Res.* 86: 35-45.

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**2) Important and/or sensitive aspects of marine fish and fish habitat**

- a) Are there any particularly important and/or sensitive aspects of marine fish and fish habitat that the Regional Assessment and its recommendations should focus on (e.g., locations, times, species, etc.)?

**3) Potential interactions between offshore exploratory drilling and marine fish and fish habitat**

- a) In addition to the issues and interactions listed in the backgrounder for this session, are there any others that should be considered in the Regional Assessment?

**4) Existing and potential mitigation and follow-up requirements**

- a) In addition to the standard measures listed in the backgrounder for this session, do you have any suggestions for any required new or different ones?  
b) Do you have any suggestions for issue- or situation-specific (certain activities, areas, times) measures that should be considered?

**Do you have any other input or recommendations that you would like to provide to the Committee on this topic?**

The existing EEM programs are extensive and contain information that is transferable to large portions of the geographic area covered by the Regional Assessment. A systematic review of EEM program reports (available at the C-NLOPB website identified above) should be undertaken. Such a review was performed as part of the Hebron EEM Plan (also available at the C-NLOPB website above). This should be updated with information from the most recent reports.