

REVIEW COMMENTS

Fisheries and Oceans

The proponent should be advised that the review of seismic program proposals by the Department of Fisheries and Oceans is in part informed by the "Statement of Canadian Practice with respect to the Mitigation of Seismic Sound in the Marine Environment" (SOCP). The SOCP outlines minimum standards to reduce the effect of seismic survey activity on marine life. DFO also considers other factors when providing advice on marine seismic surveying including impacts on DFO research activity, commercial fisheries, sensitive areas, and vessel traffic.

NL Department of Fisheries and Aquaculture

There are a number of fisheries closures in place under NAFO to protect Vulnerable Marine Ecosystems. These should be picked up under the "sensitive" area review.

The Canadian Association of Prawn Producers and Northern Coalition should be on the consultation list. They represent the offshore shrimp fleet which fish within the project area.

Environment Canada

Regulatory Requirements

Fisheries Act

The proponent should be aware of the general applicability of Section 36(3) of the *Fisheries Act* which states: "no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substances or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water". Environmental protection and mitigation measures should reflect the need to comply with Section 36(3) of the Fisheries Act. For example, measures should be taken to prevent substances such as lubricating fluids, fuels, etc. from being deposited into water frequented by fish, and drainage from construction and operational drainage must not be harmful to fish.

Migratory Birds Convention

Migratory birds, their eggs, nests, and young are protected under the *Migratory Birds Convention Act* (MBCA). Migratory birds protected by the MBCA generally include all seabirds except cormorants and pelicans, all waterfowl, all shorebirds, and most land birds (birds with principally terrestrial life cycles). Most of these birds are specifically named in the Environment Canada (EC) publication, *Birds Protected in Canada under the Migratory Birds Convention Act*, Canadian Wildlife Service Occasional Paper No. 1.

Under Section 6 of the Migratory Birds Regulations (MBR), it is forbidden to disturb, destroy or take a nest or egg of a migratory bird; or to be in possession of a live migratory bird, or its carcass, skin, nest or egg, except under authority of a permit. It is important to note that under the current MBR, no permits can be issued for the incidental take of migratory birds caused by development projects or other economic activities.

Furthermore, Section 5.1 of the MBCA describes prohibitions related to deposit of substances harmful to migratory birds:

(1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

(2) No person or vessel shall deposit a substance or permit a substance to be deposited in any place if the substance, in combination with one or more substances, results in a substance — in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area — that is harmful to migratory birds.

It is the responsibility of the proponent to ensure that activities are managed so as to ensure compliance with the MBCA and associated regulations.

Species at Risk Act

The Responsible Authority should be reminded that the Species at Risk Act (SARA) amends the definition of “environmental effect” in subsection 2(1) of the Canadian Environmental Assessment Act (CEAA) to clarify, for greater certainty, that environmental assessments must always consider impacts on a listed wildlife species, its critical habitat or the residences of individuals of that species.

SARA also requires that the person responsible for a federal environmental assessment must, without delay, notify the competent minister(s) in writing if the project being assessed is likely to affect a listed wildlife species or its critical habitat. Notification is required for all effects, including adverse and beneficial effects, and the requirement to notify is independent of the significance of the likely effect. The person must also identify adverse effects of the project on listed species and their critical habitat. And if the project is implemented, the person must ensure that measures are taken to avoid or lessen adverse effects and that effects are monitored. Mitigation measures must be consistent with recovery strategies and action plans for the species.

The complete text of SARA, including prohibitions, is available at www.sararegistry.gc.ca . For guidance on SARA and Environmental Assessments, the proponent may wish to make use of the *Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada* available at:

http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf

Canadian Environmental Protection Act

The proponent should also be aware of the potential applicability of the *Canadian Environmental Protection Act* (CEPA). The *Canadian Environmental Protection Act* enables protection of the environment, and human life and health, through the establishment of environmental quality objectives, guidelines and codes of practice, and the regulation of toxic substances, emissions and discharges from federal facilities, international air pollution, and disposal at sea.

Migratory Birds & Species at Risk

The Canadian Wildlife Service of EC (EC-CWS) has reviewed the above project and has the following comments.

In general, mention of marine birds was very brief and is missing required information, however it is understood that this information will be provided in the document to be submitted in the next phase of the environmental assessment. Several main reference sources for marine bird distribution at sea could have been consulted to describe the seabird resource in the area.

Those references are provided here:

- Brown, R. G. B. 1986. Revised Atlas of Eastern Canadian Seabirds. Canadian Wildlife Service, Ottawa, ON.
- Fifield, D. A., Lewis, K. P., Gjerdrum, C., Robertson, G. J., and Wells, R. 2009. Offshore Seabird Monitoring Program. Environment Studies Research Funds Report no. 183. St. John's. 68 p. Available at: <http://www.esrfunds.org/pdf/183.pdf>
- Lock, A. R., Brown, R. G. B., and Gerriets, S. H. 1994. Gazetteer of Marine Birds in Atlantic Canada: An Atlas of Vulnerability to Oil Pollution. Canadian Wildlife Service, Atlantic Region.

The project description should address the points outlined in the scoping document, as quoted below:

Scoping Document, Section 5.2.2 Marine and/or Migratory Birds

The EA shall provide a summary description, where applicable, of the information presented in existing environmental reports for the Northeast Newfoundland Slope area. New or updated information should be provided, where applicable, to address any changes to the following:

- Spatial and temporal species distributions (observations from prior programs should be included);
- Species habitat, feeding, breeding, and migratory characteristics of relevance to the Study Area;
- Noise disturbance from seismic equipment including both direct effects (physiological), or indirect effects (foraging behaviour, prey species, adult attendance at the nest);
- Physical displacement as a result of vessel presence (e.g. disruption of foraging activities);
- Attraction of, and increase in, predator species as a result of waste disposal practices (i.e., sanitary and food waste);
- Nocturnal disturbance from light (e.g. increased opportunities for predators, attraction of birds to vessel lighting and subsequent collision, disruption of incubation);
- Procedures for handling birds that may become stranded on survey vessels;
- Means by which bird mortalities associated with project operations may be documented and assessed;
- Effects of hydrocarbon spills from accidental events, including fluid loss from streamers and operational discharges (e.g. deck drainage, gray water, black water); and

- Means by which potentially significant adverse effects upon birds may be mitigated through design and/or operational procedures; and Environmental effects due to the Project, including cumulative effects.

Scoping Document, Section 5.2.5 Species at Risk (SAR)

Provide a summary description, where applicable, of the information presented in existing environmental reports for the Northeast Newfoundland Slope area. New or updated information should be provided, where applicable, to address any changes to the following:

- A description of SAR as listed in Schedule 1 of the *Species at Risk Act (SARA)*, and those under consideration by COSEWIC in the Study Area, including fish, marine mammal, sea turtles, and seabird species. It is advised that the SARA Registry and COSEWIC website be referred to for the most recent information;
- A description of critical habitat (as defined under SARA), if applicable, to the Study Area;
- Monitoring and mitigation, consistent with recovery strategies/action plans (endangered/threatened) and management plans (special concern);
- A summary statement stating whether project effects are expected to contravene the prohibitions of SARA (Sections 32(1), 33, 58(1));
- Means by which adverse effects upon SAR and their critical habitat may be mitigated through design, scheduling, and/or operational procedures; and
- Assessment of effects (adverse and significant) on SAR and critical habitat, including cumulative effects.

EC-CWS also has the following general recommendations:

Data

In an effort to expedite the process of data exchange, the EC-CWS requests that the data (pertaining to migratory birds and species at risk) collected from surveys be forwarded in digital format to our office following completion of the study. These data will be centralized for our use for these species in Newfoundland and Labrador. Metadata will be retained to identify source of data and will not be used for the purpose of publication. EC-CWS will not copy, distribute, loan, lease, sell, or use of this data as part of a value added product or otherwise make the data available to any other party without the prior express written consent.

Cumulative Effects

The discussion of cumulative effects should be shaped primarily by the valued ecosystem components under consideration. While an accounting of past, present and future projects and activities is a starting point in a cumulative effects assessment, the analysis should consider how impacts from the proposed project will combine with impacts from other projects and activities. In the context of marine birds, for example, the proponent should consider how the project will contribute to existing impacts (e.g., increase in predation, loss of foraging habitat) on birds from other activities (e.g., other oil and gas activities, fishing, shipping).

Information Sources

The proponent should be aware of EC's Eastern Canadian Seabirds at Sea (ECSAS) program. This program has conducted over 4000 surveys covering 7800 km of ocean track in the Newfoundland and Labrador offshore area since 2006. The most up to date data for the study area should be included in the EA. This information is available by contacting Paul Chamberland at Paul.Chamberland@ec.gc.ca or (506) 364-5049.

While proponents are also encouraged to employ peer-reviewed literature to support their conclusions, few studies on the interactions between birds and seismic survey activities have been conducted¹, and none have been conclusive. It is important to recognize the limited applicability of available research findings in the discussion of impacts (i.e., conclusions likely do not apply to interactions with large concentrations of birds). It should also be noted that, while the Eastern Canadian Seabirds at Sea dataset contains the most recent seabird data available for the Newfoundland and Labrador offshore area, surveys have not been dedicated to determining impacts of seismic on seabirds, but rather are distribution data collection exercises.

While an EA may conclude that the overall impact of a seismic survey on seabirds is relatively small, it remains important that the opportunity for this activity to impact federally-protected avian species be properly acknowledged in the EA. Accordingly, it is also expected that the proponent commit to all reasonable measures to mitigate the potential for such impacts to occur. These measures are outlined below.

Mitigation

Mitigation measures related to adverse effects, including cumulative effects, should be identified. Measures should be consistent with the *Migratory Bird Convention Act* and SARA and with applicable management plans, recovery strategies and action plans. Mitigation should reflect a clear priority on impact avoidance opportunities. The following specific measures should be among those which are considered in preparing a mitigation strategy:

- Should storm-petrels or other species become stranded on vessels, the proponent is expected to adhere to the protocol described in Williams and Chardine's brochure entitled, *The Leach's Storm Petrel: General Information and Handling Instructions*. A permit is required to implement the Williams and Chardine protocol. **The proponent should be advised that it is required to complete a permit application form prior to proposed activities.** This form is available from Andrew Macfarlane at the Canadian Wildlife Service, who can be reached by phone at 506-364-5033 or email at andrew.macfarlane@ec.gc.ca.
- Ramping-up the air gun array over a 30-minute period - a procedure typically used for other animal groups - may encourage marine birds to leave the survey area and may reduce the potential for adverse interactions between the project and marine birds accordingly.

¹ These studies include: Lacroix et. al. (2003); Stemp (1995); Turnpenny and Nedwell (1994); and Evans et. al. (1993).

- It is expected that the proponent demonstrate how they will minimize or prevent the release of hazardous substances onboard the seismic vessel (e.g. streamer fluid, chemicals for streamer repairs, fuels, lubricants) into the marine environment. Attention should be paid to impact avoidance and pollution prevention opportunities and a contingency plan should be developed to enable a quick and effective response in the event of a spill. Other management practices and preventative maintenance plans should be outlined such as a protocol to prevent streamer-associated spill events. This protocol should describe conditions that will allow the seismic program to be conducted without spill incidents (e.g., the range of environmental conditions within which streamers can operate, monitoring to detect leaks or tears).

Considerations Specific to Species at Risk

If a wildlife species is listed under Schedule 1 of the Species at Risk Act (SARA) or under provincial legislation (a listed wildlife species), and could be affected by seismic activities, certain steps must be taken to ensure compliance with both SARA and the *Canadian Environmental Assessment Act* (CEAA). SARA amends the definition of “environmental effect” in subsection 2(1) of the CEAA to ensure that assessments always consider potential impacts on listed wildlife species; their critical habitat; or the residences of these species.

SARA requires that the responsible authority for a federal EA notifies in writing and without delay the competent minister(s), if the project being assessed is likely to affect a listed wildlife species, its residence, or its critical habitat. In addition, any adverse effects of the project on listed species, their residences, and their critical habitat must be identified. If a project under consideration is implemented, the responsible authority must ensure that measures are taken to avoid or lessen the adverse effects on species at risk and, that these effects are monitored. Mitigation measures must be consistent with recovery strategies and action plans for species at risk. Furthermore, if such a project is being undertaken on federal land, or affects a listed migratory bird or aquatic species, the proponent will require a permit under Section 73 of SARA and permits under the Fisheries Act and Migratory Birds Convention Act.

The **Ivory Gull** has been uplisted to Endangered on SARA’s Schedule 1. This species may be found in the project area, and should be considered in the environmental assessment.

Effects of the Environment on the Project

Seismic operations will be somewhat sensitive to environmental conditions (e.g., wind, waves, ice). The EA should focus on how such conditions acting on the project could have consequences for the environment (e.g., increased risk of spills and impacts on valued ecosystem components).

Effects of Accidents and Malfunctions

The mandatory assessment of environmental effects that result from accidents and malfunctions should include a consideration of potential spill events, such as spills from damaged seismic streamers. The assessment should be guided by the need to ensure compliance with the general prohibitions against the deposit of a deleterious substance into

waters frequented by fish (Section 36, *Fisheries Act*) and against the deposit of oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds (Section 35, Migratory Birds Regulations). In addition, it should be focused on potential worst-case scenarios (e.g., concentrations of marine birds, presence of wildlife at risk). Based on this analysis, the EA should describe the precautions that will be taken and the contingency measures that will be implemented to avoid or reduce the identified impacts.

Proponents are encouraged to prepare contingency plans that reflect a consideration of potential accidents and malfunctions and that take into account site-specific conditions and sensitivities. The Canadian Standards Association publication, *Emergency Preparedness and Response*, CAN/CSA-Z731-03, is a useful reference.

All spills or leaks of petroleum or other hazardous materials, including those from machinery, fuel tanks or streamers, should be promptly contained, cleaned-up and reported to the 24-hour environmental emergencies reporting system (St. John's 709-772-2083; other areas 1-800-563-9089).