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September 8, 2021

**Re: WWF-Canada's Submission to the IAAC on the Bay du Nord Development Project Environmental Assessment (EA) Report**

Dear Impact Assessment Agency of Canada:

Thank you for the opportunity to submit comments on the Bay du Nord (BdN) Development Project Environmental Assessment (EA) Report. WWF-Canada supports the federal environmental assessment process as it is an important component in ensuring that, if oil and gas activities in Canada's Atlantic offshore are to be permitted, they are done so safely with the lowest possible risk to human health and the environment.

World Wildlife Fund (WWF) is one of the largest independent conservation organizations in the world. WWF-Canada is part of the WWF global network, working in over 100 countries worldwide. WWF-Canada creates solutions to the environmental challenges that matter most for Canadians. We work in places that are unique and ecologically important, so that wildlife, nature and people thrive together. WWF-Canada believes healthy coastal communities depend on healthy oceans. We work with communities, Indigenous peoples and other groups to advocate for marine protected areas and sustainable oceans management, and to ensure the rules governing offshore oil and gas activities are consistent with international best practices for safety, accountability and environmental protection.

While we support the impact assessment process, we are concerned that the EA report has not addressed many of the concerns we raised previously in our submission on the proponent's BdN Environmental Impact Statement (EIS) on October 16, 2020. Moreover, the 30-day comment period may not be sufficient for some organizations and individuals to submit thorough and sufficiently detailed comments on a 237-page document. Nonetheless, WWF-Canada has reviewed the BdN Development Project EA report and we offer the following comments.

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## I. Introduction

Based on the proponent's EIS statement and the input of various federal departments, the Canada-Newfoundland and Labrador Offshore Petroleum Board, Indigenous peoples and the general public, the Impact Assessment Agency of Canada (IAAC) stated the following conclusion on page iv of the EA report's Executive Summary:

*“The Agency concludes that the Bay du Nord Development Project is not likely to cause significant adverse environmental effects, taking into account the implementation of mitigation measures.”*

First and foremost, WWF-Canada would like to assert the imprudence and folly of drawing such a conclusion whilst we are in the midst of a climate emergency.<sup>1</sup> The BdN project would result in the production of millions of barrels of oil for decades to come, which simply cannot be reconciled with the urgent and critically important need to reduce greenhouse gas (GHG) emissions immediately and drastically in Canada and around the world. There are no proven mitigation measures that can undo the cumulative impacts of adding millions of additional tonnes of carbon to the atmosphere.

Arguing that BdN is only one project that will have a negligible impact on global emissions betrays a common yet misguided fallacy that is often employed when defending fossil fuel expansion. Specifically, this argument claims that it's acceptable to allow more greenhouse gas production, as long as it's a relatively small amount.

It goes without saying that the emissions of *every* new fossil fuel project on earth are relatively small compared with national or global emissions. It is the cumulative emissions of all these combined projects that is having such a devastating impact. As stated in the recent landmark report by the Intergovernmental Panel on Climate Change (IPCC) updating the physical science of climate change “There is a near-linear relationship between cumulative anthropogenic CO<sub>2</sub> emissions and the global warming they cause.”<sup>2</sup> In the words of the executive director of the United Nations Environment Programme, Inger Andersen: "It's time to get serious because every tonne of CO<sub>2</sub> emission adds to global warming."<sup>3</sup>

In another landmark report this year, the International Energy Agency (IEA) concluded that there can be **no new oil, gas or coal development if the world is to reach net zero emissions by 2050.**<sup>4</sup> Canada has made a commitment to reaching this goal yet continues to approve new fossil fuel expansion projects. Carbon emissions from the full production of currently operating oil and gas fields and coal mines across the world will lead to global temperature rise beyond 1.5°C and make it impossible to meet global obligations under the Paris Agreement.<sup>5</sup>

The trajectory to net zero by 2050 is not linear. Emissions reductions cannot be “back ended” by putting off climate action for as long as possible. Acting later means that, between now and 2050,

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<sup>1</sup> <https://www.un.org/press/en/2021/sgsm20847.doc.htm>

<sup>2</sup> [https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\\_AR6\\_WGI\\_SPM.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf)

<sup>3</sup> <https://www.unep.org/news-and-stories/speech/time-get-serious-about-climate-change-warming-planet-no-one-safe#:~:text=It's%20time%20to%20get%20serious,part%20of%20their%20Paris%20commitments.>

<sup>4</sup> <https://www.iea.org/reports/net-zero-by-2050>

<sup>5</sup> [http://ggon.org/wp-content/uploads/2019/12/GGON\\_OilGasClimate\\_English\\_Dec2019-1.pdf](http://ggon.org/wp-content/uploads/2019/12/GGON_OilGasClimate_English_Dec2019-1.pdf)

far more cumulative tonnes of greenhouse gases are emitted compared with acting fast and early. It is the cumulative amount of greenhouse gases, not the end point, that matters most.

It would be prudent to reflect upon the severity of the looming climate and biodiversity crises facing humanity. A recent article in the journal *Frontiers in Conservation Science* concluded that “The scale of the threats to the biosphere and all its lifeforms—including humanity—is in fact so great that it is difficult to grasp for even well-informed experts. Without fully appreciating and broadcasting the scale of the problems and the enormity of the solutions required, society will fail to achieve even modest sustainability goals.”<sup>6</sup>

This EA report suggests that the IAAC does not understand that every additional tonne of carbon dioxide is doing damage. The proponent has projected in its Environmental Impact Statement that the BdN project would produce approximately 300 million barrels of oil over its lifespan, which will result in the production of over 129 million tonnes of CO<sub>2</sub> equivalent.<sup>7</sup> The IAAC’s EA report comes in the wake of a record-smashing heat wave in western North America that caused hundreds of heat-related deaths in B.C. alone<sup>8</sup> and the deaths of up to 1 billion marine animals.<sup>9</sup> Also, in 2021 we’ve thus far witnessed record-setting, deadly flooding in Germany and China, raging wildfires in B.C. and California, an historic drought in the western U.S. and a devastating hurricane on the Gulf Coast, all of which can be linked to the climate crisis.

Many years of climate change inaction have led to well over 2,300 billion tonnes of CO<sub>2</sub> being added into that atmosphere. Over this time, governments have approved countless new fossil fuel projects under the pretext that, surely a few million more tonnes of CO<sub>2</sub> won’t matter. Cumulatively, however, these thousands of individual decisions have led to profound suffering and many lives being lost. Depending on the decisions taken by governments over the coming few years regarding future oil and gas projects, we’ll either experience catastrophic, unimaginable levels of global heating, or only slightly more global heating than exists today.

In concluding the EA report by stating that the BdN project is “not likely to cause significant adverse environmental effects”, the IAAC has effectively given the federal government a green light to continue to approve fossil fuel expansion at the worst possible time. The Agency has also violated its own ratings criteria which state that a project’s GHG emissions should be deemed “high magnitude and long-term” when it produces adverse effects that would “cause exceedances of objectives or standards beyond the project boundaries” and would be “measurable for greater than 20 plus years” (Appendix A). By any definition, the BdN project clearly meets these criteria, yet in the face of overwhelming scientific evidence, the IAAC has nonetheless concluded that the project’s emissions are not likely to cause significant environmental effects. In so doing, the Agency has ignored outright the IPCC’s and the IEA’s core messages - that every additional tonne of carbon dioxide emitted in the future will have a profound impact both on humanity and the natural world.

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<sup>6</sup> Bradshaw et al. 2021. *Underestimating the Challenges of Avoiding a Ghastly Future*. *Frontiers in Conservation Science*. Vol. 1. January 2021.

<sup>7</sup> [https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#:~:text=The%20average%20carbon%20dioxide%20coefficient,gallon%20barrel%20\(EPA%202020\).](https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#:~:text=The%20average%20carbon%20dioxide%20coefficient,gallon%20barrel%20(EPA%202020).)

<sup>8</sup> <https://bc.ctvnews.ca/580-died-in-b-c-due-to-heat-wave-according-to-latest-coroner-analysis-1.5525134>

<sup>9</sup> <https://www.theguardian.com/environment/2021/jul/08/heat-dome-canada-pacific-northwest-animal-deaths>

## II. Significant Environmental Effects

On page 17 of the EA, the Agency states “In accordance with the Agency’s Operational Policy Statement: Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects under CEAA 2012, the Agency assessed the significance of residual adverse Project-related environmental effects on valued components.” It is further stated on page 154 that “the environmental effects of the Project and their significance have been determined using assessment methods and analytical tools that reflect current accepted practices of EA practitioners, including consideration of the effects of potential accidents and malfunctions.”

Research indicates, however, that current accepted practices and methods used in EAs to assess impacts, both in Canada and internationally, may in fact be biased against findings of “significance” due to inadequate temporal and spatial scales of assessment and an overreliance on often unproven mitigation measures that are deemed effective without sufficient rationale.<sup>10</sup> Determinations of what constitutes a “significant adverse effect” in environmental assessments have often been found to be subjective with no clear quantitative benchmarks in many cases and little transparency around the reasoning process involved.

We believe this to be the case for the Bay du Nord project. Beyond citing the CEAA guidance document, the Agency has failed to adequately explain how the numerous potentially serious environmental impacts identified in the EA did not meet the “*significant* adverse environmental effects” benchmark in the absence of quantitative indices and a comprehensive and rigorous regional cumulative effects assessment. The methods used to assess impacts in the EA are overly subjective and may be biased against findings of “significance”, and the proposed mitigation measures have been deemed “effective” without sufficient rationale.

## III. Underwater Noise

On page 53 of the EA report, it is stated that “The Agency understands that the use of the project area by marine mammals is poorly understood” and that “underwater sound emissions from Project sources have the potential to change marine mammal behaviour, mask hearing ability, and also cause hearing injury.” Nonetheless, the Agency concluded that “The effects to marine mammals would be reversible once the Project is completed. The Agency considers the potential injury effects on marine mammals to be of low magnitude as individuals would need to be in close proximity to the sound source for 24-hours, which is unlikely. Potential behavioural effects on marine mammals may result in avoidance or displacement between 400 and 4,000 square kilometres, potentially extending outside of the project area.”

In fact, research shows that underwater noise from vessel traffic can readily propagate over 100 kilometers and the noise from seismic surveys can be heard almost continuously in some areas for distances of up to 4,000 km as seismic airgun surveys are among the loudest of human produced sounds, and sound travels very fast and efficiently in water.<sup>11</sup> Science to date clearly

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<sup>10</sup> Singh, Gerald G. et al. 2020. Scientific shortcomings in environmental impact statements internationally. *People and Nature*. March 2020: 00: 1-11. <https://www.researchgate.net/publication/340097916>

<sup>11</sup> Nieuwkirk, S. L., Mellinger, D. K., Moore, S. E., et al. (2012). Sounds from airguns and fin whales recorded in the mid-Atlantic Ocean, 1999–2009. *Journal of the Acoustical Society of America*, 131, 1102–12.

suggests that there can be serious negative effects from seismic testing on some important species, including plankton, benthic organisms, whales, including narwhals, harbour porpoises, dolphins, invertebrates including squid, and fish. These impacts can linger for months or even a year after the surveys have ceased. To date, roughly 130 species have been documented to be impacted by human-caused underwater noise pollution.<sup>12</sup> While more research is needed, we know enough from studies so far, especially those involving seismic airgun surveys, to conclude that anthropogenic underwater noise is a serious and transboundary pollutant, which can degrade huge ocean areas and do harm to marine ecosystems.

A 2015 report by Marine Conservation Research on the impacts of seismic testing on whales concluded that “It is indisputable that seismic noise has adverse impacts on marine life...From the research at hand, it is clear that noise from seismic activity impacts whales. It can damage their hearing, ability to communicate, disrupt diving behavior, feeding and migration patterns. There are increasing indications that this could cause serious injury to whales. It may also disrupt reproductive success and increase the risk of strandings and ice entrapments.”<sup>13</sup> Notably, the report also concluded that there is a massive research gap in this field and that decision-makers should use “extreme caution” before allowing seismic activity.

The IAAC has proposed a variety of measures to mitigate the impacts of underwater noise with the justification that “The effects of impulsive sound on marine mammals can be mitigated by adhering to practices outlined within the Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment (currently under review).” These measures include the following:

- “Conduct applicable geophysical surveys in accordance with the Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment;
- “Shut-down or delay ramp up of air source arrays for all marine mammals and sea turtles when observed within the safety zone;
- “Establish a safety (observation) zone of a minimum of 500 metres around the sound source; and,
- For survey activities scheduled to occur in areas where beaked and other deep-diving whales, such as the northern bottlenose whale, may be present, conduct a 60-minute pre-watch for marine mammals prior to ramp-up of the air source. If passive acoustic monitoring is being used prior to ramp-up, it would be for the same duration as visual monitoring.”

Despite mitigation measures requiring marine mammal observation, there is nothing in the EA report or the Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound prohibiting seismic testing at night or when visibility is low. If the IAAC is going to mandate a visual safety zone on seismic vessels, it seems logical to require that observers only operate at times when they are actually able to see well.

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<sup>12</sup> Weilgart, L., 2018. *The impact of ocean noise pollution on fish and invertebrates*. Report for OceanCare, Switzerland.

<sup>13</sup> <https://www.greenpeace.org/usa/wp-content/uploads/2015/08/A-Review-of-the-Impact-of-Seismic-Survey-Noise-on-Narwhal-and-other-Arctic-Cetaceans-.pdf>

In addition, there is in fact no consensus regarding what constitutes a “safe” exposure radius. The safety radius is highly dependent on the sound transmission conditions which change with bathymetry, nature of the seafloor, and the sound speed profile which can change between seasons. Impacts from airguns also can vary based on past exposure, recovery time, species, age and sex, as well as context.<sup>14</sup>

Even if it were possible to determine a safe ‘shut down zone’ radius, it can be extremely difficult for marine mammal observers on board seismic vessels (a modest mitigation measure that will not even be used by the proponent) to detect marine wildlife within that zone. Survey activities often take place at night or in other limited-visibility conditions and many marine mammals and turtles are hard to sight as they are cryptic, elusive and often underwater.<sup>15</sup> Most whales are rarely visible at the surface, especially the deep divers (e.g. Northern bottlenose whales) and especially in anything but perfect visibility. The EA report noted that the project area has some of the highest occurrence rates of marine fog in North America, which is most prevalent in spring and summer, and that these poor weather conditions may hinder the efficacy of monitoring programs and mitigation measures. Quantitative analysis has shown that mitigation monitoring detects fewer than 2 per cent of beaked whales (e.g. Northern bottlenose whales) even if the animals are directly in the path of the ship.<sup>16</sup> Other species might be slightly easier to sight, but monitoring cannot be relied upon to be satisfactorily effective.

The mitigation options being proposed in the EA are largely unproven in their effectiveness. For instance, ramp-ups or soft starts, where the number of airguns firing are gradually and audibly increased, do not appear to be consistently and reliably effective in causing humpback whales to move away from the source vessel.<sup>17</sup> There is large variation in whale behavior, with some groups swimming away from the sound source whereas others approached even relatively loud noise levels, possibly viewing them as a challenge that needed to be confronted. Whales that did avoid the (source) vessel emitting airgun noise may have avoided the vessel itself, not the noise.<sup>18</sup> Although the sound source was different (naval sonar vs. seismic airguns), and the ramp-up procedures are different, gradually increasing the sonar source intensity has been found not to be an effective method to reduce the risk of physiological effects for humpback whales overall, mainly because most whales did not exhibit very strong avoidance responses to the sonar signals.<sup>19</sup> Animals that had not been exposed to sonar recently, were not feeding, or were with a small calf were more responsive. This again illustrates how difficult it is to form conclusions about innocuous noise impacts since whales, but also fish, show great variation in their behavior in the wild. Moreover, when animals have a strong motivation not to move away from their current location, ramp-ups are unlikely to be effective.

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<sup>14</sup> Gordon, J. et al. 2003. A Review of the Effects of Seismic Surveys on Marine Mammals. *Marine Technology Society Journal*. 37(4): 16-34

<sup>15</sup> Weilgart, 2019.

<sup>16</sup> Barlow, J. and Gisiner, R. 2006. Mitigating, monitoring and assessing the effects of anthropogenic sound on beaked whales. *Journal of Cetacean Research and Management*, 7(3), pp.239-249.

<sup>17</sup> Dunlop, R.A. et al. 2017. Response of humpback whales to ramp-up of a small experimental airgun array. *Marine Pollution Bulletin*. 103: 1-2.

<sup>18</sup> Ibid.

<sup>19</sup> Wensveen et al. 2017. Lack of behavioural responses of humpback whales indicate limited effectiveness of sonar mitigation. *Journal of Experimental Biology*. 220(22): 4150-4161.

The Agency must substantially strengthen the rules and mitigation measures for seismic airgun surveys and base them on the best available science. The most effective mitigation for seismic airgun surveys are:

- Remove the surveys from areas/seasons rich in marine life and sensitive species;
- Lower the source level (quiet the noise); and,
- Require the use of airgun alternatives such as Marine Vibroseis, which can drastically cut noise levels and limit the frequencies (itches) of noise output.

#### IV. Special Areas

On page 76 of the EA, it is acknowledged that “The Agency is of the opinion that the Project may cause adverse environmental effects on special areas.” As such, WWF-Canada requests again that the IAAC include a recommendation in the report that no oil and gas activities be permitted within protected areas and other areas that aim to protect important benthic habitats, conserve biodiversity and uphold Canada’s commitments to marine conservation under the North Atlantic Fisheries Organization (NAFO).

As outlined in the Canadian Science Advisory Secretariat (CSAS) document “Proceedings of the National Peer Review Meeting on the Assessment of the Effectiveness of Mitigation Measures in Reducing the Potential Impacts of Oil and Gas Exploration and Production on Areas with Defined Benthic Conservation Objectives”<sup>20</sup> it was recommended that for areas with defined benthic conservation areas that the mitigation hierarchy be applied: (1) avoid; (2) mitigate; and (3) offset (though recognizing that offsetting will not be possible for areas with benthic conservation objectives as there is no way to offset these unique, structurally complex habitats). As the first mitigation measure should be to avoid significant benthic areas by eliminating the possibility of interaction, video surveys should be done to confirm the presence or absence of sensitive species and/or habitats, and minimum setbacks applied to planned well and infrastructure locations.

CSAS recently released an additional Science Advisory Report on “Coral and Sponge Mitigation in Relation to Exploratory Drilling Programs in the Newfoundland and Labrador Region.”<sup>21</sup> While this avoidance and mitigation framework was developed for exploratory drilling to eliminate or minimize impacts on corals and sponges, it is reasonable to assume that the principles would hold for development drilling occurring in the same region as the previously mentioned CSAS document stated that “compared to exploration, development and production are generally considered to have increased risk for impacts to benthic species and habitats, greater seabed footprints and longer timeframes”. The main message of this science advice from Fisheries and Oceans Canada (DFO) was that drilling activities should not overlap areas with defined benthic conservation objectives, such as significant benthic areas and vulnerable marine ecosystem habitats. The science advice also noted that outside of these habitats, the zone of influence from

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20 [http://www.dfo-mpo.gc.ca/csas-sccs/Publications/Pro-Cr/2020/2020\\_021-eng.pdf](http://www.dfo-mpo.gc.ca/csas-sccs/Publications/Pro-Cr/2020/2020_021-eng.pdf)

21 DFO. 2021. Coral and Sponge Mitigations in Relation to Exploratory Drilling Programs in the Newfoundland and Labrador Region. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2021/028.



drilling activities should be at least 2 km away from significant densities of corals and sponges identified in pre-drill surveys.

Both DFO and the Agency indicated that the proponent underestimated or downplayed the extent of potential effects from waste discharges, drill mud and synthetic-based cuttings and that their negligible effect conclusion regarding these effects is unsupported and the geographic extent of the effects is likely greater than predicted. The Agency noted that the potential burial effects and potential toxicity from the cuttings deposition are greater than the proponent indicated and could potentially cause impacts to benthic habitats and communities up to 110 km<sup>2</sup> from the drill site. By the Agency's own estimation drilling muds alone could cause adverse toxic harm to the sensitive benthic habitats in almost 9 per cent of the Northwest Flemish Cap (10) Fisheries Closure Area, a protected area set up to safeguard those specific sensitive benthic habitats, and that based on the slow growth and rate of recolonization of benthic species in deep, cold-water habitats the **effects are potentially permanent and may not be reversible**. While DFO noted that there is potential for most of the project activities to cause adverse environmental effects on special areas, and the Agency stated that potential cumulative effects of drill cuttings and associated muds on special areas distinguished for their important benthic habitats are noteworthy, it was still concluded that the Project is not likely to cause significant adverse cumulative environmental effects on special areas or fish and fish habitat, but also based this reasoning in part that drilling can avoid sensitive benthic habitats. For that to be the case, these habitats do, in fact, need to be avoided.

As is previously stated, avoidance is the main way to protect sensitive benthic habitats. The Agency also stated that they understand that potential effects to benthic habitats would be reduced if wells and infrastructure are located in less sensitive habitats but did also note that impacts could be reduced if compensation measures are implemented for habitat loss. We reiterate DFO science guidance that recognizes that offsetting will not be possible for areas with benthic conservation objectives as there is no way to offset these unique, structurally complex habitats. At a minimum, the proponent should not be allowed to drill within the fisheries closures which were created to protect these fragile ecosystems, in addition to areas identified as significant benthic areas and vulnerable marine ecosystem habitats. In addition, while we do appreciate that benthic surveys would be required prior to drilling or placement of infrastructure, and that if aggregations of habitat forming corals or sponges are found that proponents must relocate, we do not agree that it should be only when technically feasible. As noted previously, there is no way to offset the impact of drilling in sensitive benthic habitats, and the only mitigation is to relocate.

## V. Greenhouse Gas Emissions

The majority of WWF-Canada's previous comments on the proponent's Environmental Impact Statement have not been addressed by the IAAC in this EA report. The Agency instead states that "Based on 2018 Canadian GHG emissions from ECCC, the Agency determined project GHG emissions would account for 0.03 percent or less of Canada's GHG emissions" and therefore concluded that "Taking into the account the implementation of mitigation measures, the Agency is of the view that the Project is not likely to cause significant adverse environmental effects on air quality or as a result of greenhouse gas emissions."

As explained in the ‘Introduction’ section above, for the IAAC to argue that the BdN project’s GHG contributions are relatively small compared to all of Canada’s emissions is disingenuous. First, this figure does not take into account downstream emissions, which can increase a project’s total GHG output by up to ten times.<sup>22</sup> According to a 2017 analysis from the Climate Accountability Institute, downstream emissions account for 90 per cent of a project’s total lifecycle emissions.<sup>23</sup>

Second, there is no individual fossil fuel project in the world that would account for a large proportion of a country’s total GHG emissions. It is the cumulative emissions of all these combined emissions that are having such a devastating impact. What the IAAC is engaging in with this EA report is an acknowledgement of the macro global problem of climate change, while refusing to consider the micro components that comprise it. Again, the International Energy Agency (IEA) has recently concluded that there can be **no new oil, gas or coal development if the world is to reach net zero emissions by 2050**.<sup>24</sup> Carbon emissions from the full production of currently operating oil and gas fields and coal mines across the world will lead to global temperature rise beyond 1.5°C and make it impossible to meet global obligations under the Paris Agreement.<sup>25</sup>

Next, it is still not clear to us how the BdN project will achieve a 50 per cent emissions reduction compared with the four other drilling rigs offshore of Newfoundland-Labrador. Emissions mitigation measures listed in the report and the proponent’s EIS appear to be fairly standard measures for offshore drilling rigs (flaring, high efficiency burners, etc.).

Finally, it is misleading to compare the project’s emissions to Canada’s total emissions in 2018 when the government has committed to almost complete decarbonization (net zero) by 2050. The BdN project is expected to operate for decades (i.e., beyond 2050). A much more relevant metric would be for the IAAC to consider the project’s emissions (upstream and downstream) compared with Canada’s total estimated emissions in 2050, under the assumption that the country’s net zero targets are reached.

It should be noted here as well that the EA report incorrectly states Canada’s climate target as “a 30 percent reduction below 2005 emission levels by 2030”, whereas in July of this year the government increased its target to a 40-45 per cent reduction below 2005 levels by 2030.<sup>26</sup> Ironically, the EA has acknowledged on page 125 that “the project area is predicted to experience changes in climate beyond what is presently found in recent trends and interannual variability” including air and sea surface temperature increases, which could present additional challenges and threats to its operations, yet approval of this project will only exacerbate the very climatic changes that the Bay du Nord proponent will have to cope with in coming years.

## VI. Accidents and Malfunctions

On page 109, the Agency states that “World Wildlife Fund – Canada expressed concerns related to the effectiveness of a spill response, in severe weather in deep waters offshore Newfoundland

<sup>22</sup> Lee, M. 2017. Extracted Carbon: Re-examining Canada’s Contribution to Climate Change through Fossil Fuel Exports. *Canadian Centre for Policy Alternatives*, p.5. <https://www.policyalternatives.ca/publications/reports/extracted-carbon>

<sup>23</sup> Climate Accountability Institute. 2017. The Carbon Majors Database: CDP Carbon Majors Report 2017.

<sup>24</sup> <https://www.iea.org/reports/net-zero-by-2050>

<sup>25</sup> [http://ggon.org/wp-content/uploads/2019/12/GGON\\_OilGasClimate\\_English\\_Dec2019-1.pdf](http://ggon.org/wp-content/uploads/2019/12/GGON_OilGasClimate_English_Dec2019-1.pdf)

<sup>26</sup> <https://www.canada.ca/en/environment-climate-change/news/2021/07/government-of-canada-confirms-ambitious-new-greenhouse-gas-emissions-reduction-target.html>

and Labrador.” While extremely important, this is in fact not the most significant point we made in our previous submission about accidents; hence, we will repeat some of our previous comments here.

The IAAC is requiring that the proponent “undertake all reasonable measures to prevent accidents” but is not requiring that a capping stack or relief drilling unit be kept anywhere near the project vicinity. Instead, in the event of a subsea blowout, a capping stack would be shipped from either Norway or Brazil, taking up to 36 days of an incident occurring. Drilling a relief well would take even longer with an estimate provided of 100 to 115 days during which an out of control well would release millions of litres of oil into the North Atlantic.

The Agency has accepted the proponent’s assertion that “having a capping stack system in eastern Canada would be unlikely to reduce the overall time for installation”, citing the fact that containment of a blown out well requires mobilization of equipment to prepare the subsea release site before use of a capping stack, including clearing of the site and cutting away of debris to ready the well for capping stack installation. It is difficult for WWF-Canada to believe that up to 36 days of site preparation would be required to install a capping stack. If this were true, why are offshore operators in Alaska required to have a capping stack onsite within 24 hours of a well blowout?<sup>27</sup> The IAAC should similarly require the proponent to have immediate access to surface and subsea containment resources that would be adequate to promptly respond to a blowout or other loss of well control.

The probability of a major accident or blowout varies depending on many factors, including characteristics of the well; well pressure; water depth; operating conditions (for example, weather); and whether it is an exploration, appraisal, development or production well. It is worth noting here that some of the conditions that can increase the risk of a well blowout are present in the BdN project such as deep water, extreme weather and the need for some exploration and development drilling. For instance, in the case of the 2018 Husky Sea Rose FPSO accident off the coast of Newfoundland and Labrador, the largest spill in the province’s history, was the result of a severe storm (not uncommon in the North Atlantic) and poor judgement by the operator to resume operations by attempting to reconnect a flowline in high sea state conditions – storm conditions deemed unsafe to deploy on-water response to the spill.

The estimate risk given in the EIS and accepted by the IAAC is not accurate in our view and, crucially, it does not consider how the risk calculus changes when the consequences of a major spill are extremely serious and the prospects for mounting an effective spill response 500 km offshore in severe weather conditions are uncertain. BdN drilling will be taking place at water depths of 1,000 to 1,200 metres (deep water drilling). A Scandower report based on SINTEF data concludes that the blowout risk of “normal” wells in deep water is actually  $3.1 \times 10^{-4}$  and, if the BdN project entails drilling ‘high pressure, high temperature’ (HPHT) wells, the blowout frequency is  $1.9 \times 10^{-3}$  according to SINTEF,<sup>28</sup> an order of magnitude higher than the estimate provided by the proponent. It appears that the proponent is not yet certain about the need for high pressure high temperature (HPHT) wells, given that the EIS states on page 2-47 that geotechnical surveys would be required to measure pore pressure. Additionally, page 16-17 of the EIS states that “The severity of the kick depends on the porosity and the permeability of the

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<sup>27</sup> <https://www.federalregister.gov/documents/2016/07/15/2016-15699/oil-and-gas-and-sulfur-operations-on-the-outer-continental-shelf-requirements-for-exploratory>

<sup>28</sup> <sup>28</sup> Officer of the Watch. August 6, 2013. *The Probability of an Offshore Accident*. <https://officerofthewatch.com/2013/08/06/the-probability-of-an-offshore-accident/>

formation.” If HPHT drilling wells are required, the blowout risk will be much higher than stated in the EIS.

Finally, the Agency concludes, with respect to major accidents, that “the potential effects of a worst-case accident or malfunction from the Project on commercial fisheries would not be significant...with the implementation of mitigation measures, including the *requirement to compensate for any damages to commercial fishing caused by an accident or malfunction*” (emphasis added). From our perspective, this is truly a dangerous and presumptuous conclusion for the IAAC to reach without further clarification. The impacts of a major spill or well blowout on the local fishery could be catastrophic and could continue for years. Thirty years after the Exxon Valdez spilled 4.2 million liters of crude oil into Prince William Sound in Alaska, the fishing industry has not fully recovered<sup>29</sup> and many Alaskan beaches remain polluted to this day with an estimated 20,000 gallons (75,000 liters) of crude oil buried just inches below the surface. How much compensation would the fishing industry in the Atlantic provinces receive from the proponent for such catastrophic losses? For how many years would the compensation continue? Would Indigenous groups be compensated for impacts to their cultural practices and traditions? It is worrisome that none of these questions is addressed in the EA report. Instead, the fishing industry and coastal Indigenous groups have simply been told to accept that the risks of a major accident are low and, should one occur, they will be compensated to some unknown extent for an unspecified period of time for any damages.

Thank you again for the opportunity to submit comments on the Bay du Nord Development Project Environmental Assessment Report.

Sincerely,

<Original signed by>

Sigrid Kuehnemund  
Vice President, Wildlife and Industry  
World Wildlife Fund Canada

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<sup>29</sup> Yardley, W. May 5, 2010. Recovery Still Incomplete After Valdez Spill. *New York Times*.  
<https://www.nytimes.com/2010/05/06/us/06alaska.html>