

Draft Regional Assessment of Offshore Oil and Gas Exploratory Drilling East of NL Report – ECCC Editorial Comments:

Original Text	Revised Text	Rationale/Recommendation
Wildlife		
Section 2.5.4 – Data Holdings; Table 2.5 – Data Holdings		
1) Quote (pg. 34) “ <i>Barrow’s Golden Eye</i> ”	“ <i>Barrow’s <u>Goldeneye</u></i> ”	ECCC requests that the Committee revise the spelling of this to “ <i>Barrow’s Goldeneye</i> ” throughout the report and in the GIS Decision-support tool, if necessary.
Section 3.2.2 – Marine and Migratory Birds		
<p>2) Quote (pg. 56) “<i>Some taxa are abundant year-round (e.g. large gulls and kittiwakes, many alcid species, fulmars, and shearwaters) while some are more likely to be present in particular seasons (e.g. phalaropes, gannets and terns).</i>”</p> <p>Quote (pg. 56) “<i>Leach’s Storm-petrels are the most abundant breeding seabird in Newfoundland.</i>”</p>	<p>“<i>Some taxa are abundant year-round (e.g. large gulls and kittiwakes, many alcid species, fulmars, and shearwaters) while some are more likely to be present in particular seasons (e.g. both species of phalaropes, Northern gannets and terns).</i>”</p> <p>“<u>Leach’s Storm-petrel</u> are the most abundant breeding seabird in Newfoundland.”</p>	<p>In this sentence, “gannets” is meant to suggest multiple individuals, but could also suggest multiple species. Northern Gannet is the only species that is present in the area. ECCC requests that the Committee revise the text to specify “Northern Gannet” to avoid misinterpretation.</p> <p>In this sentence, “phalaropes” is likely meant to suggest multiple species (i.e., both species of phalaropes; red and red-necked), but may also suggest multiple individuals of unspecified species. ECCC requests that the Committee revise the text to “both species of phalarope” to avoid confusion.</p> <p>When “Leach’s Storm-petrels” is written as a plural subject, it suggests multiple individuals, whereas “Leach’s Storm-petrel” written as a singular object clearly refers to the species. ECCC requests that the Committee revise the text to use “Leach’s Storm-petrel”. Additionally, the document should be reviewed to ensure that it is written consistently as “Leach’s Storm-petrel” throughout (not “Leach’s Storm-Petrel”).</p>

<p>3) Quote (pg. 55) “This includes seabirds and other avifauna that inhabit the region at particular or extended periods for breeding, feeding, migration and other activities.”</p>	<p>“The Study Area provides important areas for foraging seabirds and other avifauna that inhabit the region <u>during</u> breeding season, migratory stopovers, and overwintering.”</p>	<p>Seabirds and avifauna use the waters in the Study Area for foraging during breeding, migration, etc. This statement should be clarified.</p>
<p>4) Quote (pg. 55) “Eastern Newfoundland has important bird habitats along the coastline and elsewhere in the province.”</p>		<p>This statement is not clear; does it refer to the fact that many areas off Eastern NL support large numbers of marine birds, or does it refer to the fact that there are a number of Ecological Reserves and Important Bird Areas in Eastern NL?</p> <p>ECCC requests that the Committee clarify this statement to avoid conflation.</p>
<p>5) Quote (pg. 56) “The timing of species presence and density varies considerably depending on the species. Some taxa are abundant year-round (e.g. large gulls and kittiwakes, many alcid species, fulmars, and shearwaters) while some are more likely to be present in particular seasons (e.g. phalaropes, gannets, and terns).”</p> <p>Quote (pg.56) “IUCN listed the species as globally vulnerable in 2018 due to population declines, particularly in Newfoundland. Population declines of between 40 and 55 percent have been observed at all three of Newfoundland’s largest Leach’s Storm-Petrel colonies, including Baccalieu Island which is the largest colony in the world.”</p>	<p>“Some taxa are abundant year-round (e.g. large gulls and Black-legged Kittiwake, many alcid species, Northern fulmars, and shearwaters) while some are more likely to be present in particular seasons (e.g., both species of phalarope, Northern Gannet, and terns).”</p> <p>“IUCN listed the species as globally vulnerable in 20182016 due to population declines, particularly in Newfoundland. Over the past few decades, population declines of between 40 and 55 percent have been observed at all three of Newfoundland’s largest Leach’s Storm-Petrel colonies, including Baccalieu Island which is the largest colony in the world.”</p>	<p>In a number of cases throughout the statement, the Committee has generalized the species that are present in the area, providing inaccurate information. For example, Black-legged Kittiwake and Northern Gannet are the only species of kittiwake and gannet, respectively, that are present in the Study Area, so saying “kittiwakes” and “gannets” suggests multiple species.</p> <p>P 56 - Leach’s Storm-Petrel was listed as Globally Vulnerable <i>in 2016 not in 2018 as stated.</i></p>
<p>6) Quote (pg. 56) “A diverse assemblage of seabirds occur in the marine waters off Eastern Newfoundland including cormorants, gannets, phalaropes, gulls, terns, alcids (auks), jagers and skuas, and tubenoses (fulmars, petrels, and shearwaters).</p>	<p>“A diverse assemblage of seabirds occur in the marine waters off Eastern Newfoundland including cormorants, Northern Gannets, phalaropes, gulls, terns, alcids (auks), jagers and skuas, and tubenoses (fulmars, petrels, and shearwaters).</p>	<p>Same comment as comment 5 above – ECCC requests that the Committee change “gannets” to “Northern Gannet”, given that the Northern Gannet is the only species of gannet that is present in the Study Area.</p>
<p>7) Quote (pg. 56) “Many of these taxa nest along the coastline of Eastern Newfoundland.”</p>	<p>“Many of these taxa nest along the coast or on offshore islands off Eastern Newfoundland.”</p>	<p>This statement should clarify that seabirds nest along the coast or on offshore islands off Eastern Newfoundland.</p>

8) Quote (pg. 56) <i>“The highest abundance of seabirds occurs in November (driven mainly by high numbers of Northern Fulmars and Black-legged Kittiwakes).</i>	<i>“The highest abundance of seabirds occurs in November (driven mainly by high numbers of Northern Fulmars and Black-legged Kittiwakes).”</i>	This statement requires a closed parenthesis.
9) Quote (pg. 56) <i>“The highest abundance of seabirds occurs in November (driven mainly by high numbers of Northern Fulmars and Black-legged Kittiwakes. Abundance is also high in early spring to summer (April to July) due to large numbers of Dovekies (migrating to their colonies in Greenland in April)...”</i>		This statement is inconsistent with the statement on page 60 (Section 3.2.2.5 – Key Areas and Times) <i>“In the winter months, certain groups are absent or scarce, such as gannets, terns, cormorants and phalaropes. Tens of millions of Dovekies travel several thousand kilometers from their breeding grounds to their core winter distribution within the highly productive waters off Eastern Newfoundland (Fort et al. 2012, 2013).”</i> which states that Dovekies may also be migrating through the Study Area during the winter months. ECCC requests that the Committee revise the statement on page 56 to remain consistent with the additional information provided in Section 3.2.2.5.
10) Quote (pg. 56, Paragraph 2) <i>“Leach’s Storm-petrels are the most abundant breeding seabird in Newfoundland... This coincides with the fledging period, suggesting that many Leach’s Storm-petrels affected are recent fledglings.”</i>		This entire paragraph is notable lacking in references. ECCC requests that the Committee include references throughout to support the information provided.
11) Quote (pg. 56) <i>“The causes of Leach’s Storm-petrel population decline are multi-faceted, but offshore activities are often considered to be a contributing factor.”</i>	<i>“The causes of Leach’s Storm-petrel population decline are multi-faceted, but offshore activities are often considered to be a contributing factor.”</i>	Offshore activities are considered to be a contributing factor.
12) Quote (pg. 57) <i>“Thick-billed Murres from Greenland and Iceland are of international conservation concern due to declining breeding populations and some of those populations have been Red-Listed by the IUCN. Millions of Dovekies from globally significant breeding colonies in Greenland also migrate through the Labrador Sea in fall, to access wintering grounds on the Grand Banks.”</i>		ECCC requests that the Committee revise these sentences with the inclusion of references.
		13) ECCC requests that the Committee include a statement in this section about Glaucous Gulls (<i>Larus hyperboreus</i>), which occur in the

		<p>Study Area and are experiencing steep population declines (Petersen et al. 2015).</p> <p>Reference: Petersen, A., Irons, D.B., Gilchrist, H.G., Robertson, G.J., Boertmann, D., Strom, H., Gavrilov, M., Arthkhin, Y., Clausen, D.I.S., Kuletz, K.J., Mallory, M.L. (2015). The status of Glaucous Gull <i>Larus hyperboreus</i> in the circumpolar Arctic. <i>Arctic</i>. 68: 107-120.</p>
3.2.2.3 – Shorebirds		
		<p>14) ECCC requests that the Committee include a statement in this section that specifies that Purple Sandpiper use coastal habitats in eastern Newfoundland throughout the winter, with specific reference to Gutowsky et al. 2019.</p> <p>Gutowsky, S., Ronconi, R., Gutowsky, L., Elderkin, M., Paquet, J., Mills, P., and Mallory, M. (2019). Winter habitat associations of Purple Sandpiper (<i>Calidris maritima</i>) and Harlequin Duck (<i>Histrionicus histrionicus</i>) in Atlantic Canada. <i>Estuarine, Coastal and Shelf Science</i>. 222. 10.1016/j.ecss.2019.04.024.</p>
Section 3.2.2.4 – Species at Risk and of Conservation Concern		
<p>15) Quote (pg. 60) “<i>The Ivory Gull (listed as endangered under SARA) is associated with pack ice. Recent tracking data suggests they may only go as far south as offshore of northern and northeastern Newfoundland in the winter and are unlikely to be occur within the Study Area.</i>”</p>	<p>“Recent tracking data suggests they may only go as far south as offshore of northern and northeastern Newfoundland in the winter, <u>though sightings of Ivory Gull in the Study Area have been recorded.</u>”</p>	<p>The PIROP (Programme Intégré de recherches sur les oiseaux pélagiques) database does show records of Ivory Gull within the Study Area. ECCC recommends the Committee revise this statement to reflect this clarification.</p>
Section 3.2.2.5 – Key Areas and Times		
<p>16) Quote (pg. 60) “<i>Tens of millions of Dovekies travel several thousand kilometers from their breeding grounds to their core winter distribution within the highly productive waters off Eastern Newfoundland (Fort et al. 2012, 2013).</i>”</p>	<p>“<i>Tens of millions of Dovekies travel several thousand kilometers from their breeding colonies to their core winter distribution within the highly productive waters off Eastern Newfoundland (Fort et al. 2012, 2013).</i>”</p>	<p>ECCC requests that the Committee revise this statement to replace ‘breeding grounds’ to ‘breeding colonies’</p>

<p>17) Quote (pg. 60) “These waters support a large proportion of Great Skuas from Iceland and the shelf edge off Newfoundland, is particularly important to wintering kittiwakes”</p>	<p>“These waters support a large proportion of Great Skuas from Iceland and the shelf edge off Newfoundland is particularly important to wintering Black-legged Kittiwakes.”</p>	<p>ECCC requests that the Committee include reference to Magnusdottir et al. 2012: Magnusdottir, E., Leat, E.H.K., Bourgeon, S., Strom, H., Petersen, A., Phillips, R.A., Hanssen, S.A., Bustnes, J.O., Hersteinsson, P., and Furness, R.W. (2012). Wintering areas of Great Skuas <i>Stercorarius skua</i> breeding in Scotland, Iceland, and Norway. <i>Bird Study</i>. 59: 1-9.</p>
<p>18) Quote (pg. 60) “Most of Eastern Canada’s population of Common Murres and approximately a third of the region’s Thick-billed Murres overwinter in the waters off Eastern Newfoundland</p>		<p>ECCC requests that the Committee include reference to McFarlane Tranquilla et al. 2013: McFarlane Tranquilla, L.A., Montevecchi, W.A., Hedd, A., Fifield, D.A., Burke, C.M., Smith, P.A., Regular, P.M., Robertson, G.J., Gaston, A.J., and Phillips, R.A. (2013) Multiple-colony winter habitat use by murres <i>Uria</i> spp. in the Northwest Atlantic Ocean: implications for marine risk assessment. <i>Mar Ecol Prog Ser</i> 472:287-303.</p>
<p>19) Quote (p. 61) “Baccalieu Island (also designated an EBSA and is the largest Leach’s Storm-petrel colony in the world”</p>	<p>“Baccalieu Island is home to the largest Leach’s Storm-petrel and the waters around it have been identified as an EBSA.”</p>	<p>Baccalieu Island is not an EBSA, however, the waters around it are.</p>
<p>Section 3.2.4 – Special Areas</p>		
<p>20) Quote (pg. 70) “The Study Area does not overlap directly with any of the existing provincial or federal Parks or Historic Sites (including World Heritage Sites), Representative Marine Areas, Ecological Reserves, Wildlife Reserves, Marine Protected Areas of Areas of Interest, Migratory Bird Sanctuaries, Important Bird Areas (IBAs) or other locations that have been designated as protected offshore or in coastal area on the Island of Newfoundland.”</p>		<p>ECCC requests that the Committee include National Wildlife Areas (terrestrial and marine) in the statement.</p>
<p>Section 3.4 – Data Availability, Gaps, and Opportunities; Section 3.4.1.2 – Marine and Migratory Birds</p>		
<p>21) Quote (pg. 85) “The ECSAS database contains at-sea seabird survey data collected by trained and experienced observers from ships of opportunity using a standardized protocol.”</p>	<p>“The ECSAS database contains at-sea seabird survey data collected by trained, experienced observers from ships of opportunity using a standardized protocol.”</p>	<p>ECCC requests that the Committee refer to observers as “trained, experienced observers” rather than “trained and experienced observers.”</p> <p>ECCC requests that the Committee include a reference to the ECSAS database as follows:</p>

		Gjerdrum, C., Fifield, D.A., and Wilhelm, S.I. 2012. Eastern Canada Seabirds at Sea (ECSAS) standardized protocol for pelagic seabird surveys from moving and stationary platforms. Canadian Wildlife Service Technical Report Series No. 515. Atlantic Region. vi + 37 pp.
22) Quote (pg. 85) <i>“The Atlantic Region Colonial Waterbird database maintained by CWS also provides information on colony size and the location of breeding seabirds.”</i>	<i>“The Atlantic Region Colonial Waterbird database maintained by CWS also provides information on seabird colony location and estimated number of breeding seabirds.”</i>	This statement does not correctly describe the Atlantic Region Colonial Waterbird database. This database includes information on seabird colony location and estimated number of breeding seabirds.
23) Quote (pg. 85) <i>“In general, the information that has been gathered and used for this Regional Assessment provides a good, general understanding of the distribution and abundance of marine birds in the Study Area, and is capable of highlighting important and critical use of this area at various times of years.”</i>	<i>“In general, the information that has been gathered and used for this Regional Assessment provides a good, general understanding of the distribution and abundance of marine birds in the Study Area, and highlights important and critical use of this area at various times of years.”</i>	ECCC requests that the Committee revise this statement as follows (see underlined text)
24) Quote (pg. 85) <i>“The ECSAS databased contains some spatial-temporal gaps, particularly in NAFO Divisions 3O and 3N throughout the year (southern part of the Grand Banks, which includes Whale Bank, Whale Deep, Southeast Shoal, Carson Canyon and Tail of the Grand Banks) and in 3L (northern part of Grand Banks) in autumn (Sept-Nov).”</i>	<i>“The ECSAS database contains some spatial-temporal gaps...”</i>	ECCC also requests that the Committee include information from PIROP (Programme Intégré de recherches sur les oiseaux pélagiques) throughout the report, which is a 30-year dataset that provides evidence of persistence and large-scale spatio-temporal shifts in habitat use by migratory birds. Further, the coverage provided by PIROP differs from ECSAS, and may address some of the spatial-temporal gaps for certain species (for example, phalaropes (referenced on pg. 85 <i>“little is known about phalaropes’ migration routes north to breeding colonies in the Arctic”</i>) and Ivory Gull (see comment 16).
25) Quote (pg. 85/86) <i>“Furthermore, more tracking data is needed to understand movement during migration pre and post breeding, which would help to pinpoint timing.”</i>	<i>“Furthermore, more tracking data, specifically data that is a more representative sampling of individuals and colonies, and that extends longitudinally over time, is needed to understand movement during migration pre and post breeding, which would help to pinpoint timing.”</i>	ECCC requests that the Committee include a statement in this paragraph that clarifies that “more tracking data” specifically refers to more representative sampling of individuals, colonies, and tracking that extends longitudinally over time.
26) Quote (pg. 86) <i>“For example, understanding the movement of Leach’s Storm-petrels departing breeding colonies and their overlap with the Offshore Oil and Gas platforms. A better understand of Glaucous Gull movements from breeding colonies in Labrador and further north and their use of the</i>	<i>“For example, understanding the movement of Leach’s Storm-petrels departing breeding colonies and their overlap with the Offshore Oil and Gas platforms, and gaining a better understanding of Glaucous Gull movements from breeding colonies in Labrador and further north and their use of the</i>	

<p>Study Area in winter may help to elucidate reasons for their population declines.”</p>	<p>Study Area in winter, may help to elucidate reasons for their population declines.”</p>	
<p>27)Quote (pg. 86) “CWS’ goal is to produce predictive density maps for as many species as possible for all seasons, but these products are several years away from being completed.”</p>	<p>“ECCC’s goal is to produce predictive density maps for as many species as possible for all seasons, for the entire Canadian Atlantic Ocean, but these products are several years away from being completed.”</p>	
<p>28) Quote (pg. 86) “CWS also has plans to deploy electronic tags on various species in the Study Area to further help fill knowledge gaps. This includes Glaucous Gulls, which are suffering from significant population declines in the high Arctic and Labrador and that use the Study Area extensively. Using both at-sea surveys and telemetry data to inform the distribution and abundance of marine birds in this area provides a more complete picture, as these two information sources are complementary. Tracking data provides information on birds of known colony origin, but is generally limited to breeding individuals of particular colonies and includes only a subset of species which make up the avian biodiversity of the region. By contrast, at-sea survey data provides information on most species and age-classes, but the source populations are unknown, coastal species are underrepresented and survey coverage may be incomplete.”</p>	<p>“Using both at-sea surveys and telemetry data to inform the distribution and abundance of marine birds in this area provides a more complete picture, as these two information sources are complementary. Tracking data provides information on birds of known colony origin, but is generally limited to breeding individuals of particular colonies and includes only a subset of species which make up the avian biodiversity of the region. By contrast, at-sea survey data provides information on most species and age-classes, but the source populations are unknown, coastal species are underrepresented and survey coverage may be incomplete. <u>ECCC is currently completing a study that involves deploying electronic tags on Thick-billed Murres that breed in Nunatsiavut to identify their over-wintering area, which may be the offshore waters of Newfoundland and Labrador.</u>”</p>	<p>ECCC suggests that the Committee add a statement in this section that reflects the work that it is currently undertaking in Nunatsiavut that involves deploying electronic tags on Thick-billed Murres that breed in Nunatsiavut (i.e., the Northern Coast of Labrador) to identify their over-wintering area, which may be the offshore waters of Newfoundland and Labrador.</p>
<p>Section 4.3 – Effects of Unplanned (Accidental) Events</p>		
<p>29) Quote (pg. 109) “In evaluating the various response options, operators are required to undertake a Spill Impact Mitigation Assessment (SIMA) prior to drilling to identify spill response options that will be implemented in the case of a spill to provide for the best opportunities to minimize the ecological, socio-economic and cultural impact of an oil spill through the development of a safe and effective response strategy. Response tools and strategies in the event of an oil spill may include:</p> <ul style="list-style-type: none"> a. Surveillance and monitoring; b. Mechanical containment and recovery; 	<p>ECCC requests that the Committee include “wildlife response” in the list of response tools and strategies that should be considered during the “development of a safe and effective response strategy”</p>	

<p>c. Chemical dispersion; d. In situ burning; e. Natural dispersion and degradation; and f. Shoreline protection and recovery.”</p>		
<p>Section 5.3 – Cumulative Effects Assessment; 5.3.1 – Future Exploratory Drilling Activity in the Study Area</p>		
<p>30) Quote (pg. 133) “The exercise also involved predicting the likely geographic distribution of these potential future wells for each of the Minimum, Medium, and Maximum Scenarios”</p>	<p>“The exercise also involved predicting the likely spatio-temporal distribution of these potential future wells for each of the Minimum, Medium, and Maximum Scenarios”</p>	
<p>Air Emissions and Greenhouse Gases</p>		
<p>33) P. 175 “Emissions from these activities are likely to include carbon dioxide, carbon monoxide, sulphur dioxide, nitrogen oxides, and particulate matter. A number of these are GHGs”</p>	<p>Clearly identify which of the atmospheric emissions are GHGs and which contribute to air pollution and identify the air emissions which contribute to ambient air pollution in section 4.2.5</p>	<p>Many of these pollutants are not GHGs. This statement is incorrect and very confusing.</p>
<p>Recommendations</p>		
<p>34) Quote (pg. 182) “Recommendation 2 – Operators undertaking exploratory drilling activity in the Study Area should be required to assign trained (to Environment and Climate Change Canada – Canadian Wildlife Service (ECCC-CWS) standards, once finalized) and experienced seabird observers on drill rigs and supply vessels, whose primary responsibility is to make observations and collect seabird survey data during these activities.”</p>	<p>“Recommendation 2 – Operators undertaking exploratory drilling activity in the Study Area should be required to assign trained (to Environment and Climate Change Canada – Canadian Wildlife Service (ECCC-CWS) standards, once finalized) and experienced seabird observers on drill rigs and supply vessels, whose primary responsibility is to make observations and collect seabird survey data during these activities.”</p>	<p>ECCC emphasizes that the trained and experienced seabird observer’s “primary responsibility” must be the observation and collection of seabird survey data. It is important to have a person that is dedicated only to seabird observations to ensure that high quality data is collected.</p> <p>ECCC supports this recommendation, but requests that the Committee revise the recommendation, based on the following:</p> <p>ECCC notes that training standards are in the process of being finalized, so the words “once finalized” are not necessary and should be removed.</p>