

Reference	Comment
p.1, para.1	The opening sentence refers to management being conducted at the territorial and provincial level. Please add text about role at national/federal level (e.g., SARA, CITES, Migratory Birds Convention Act).
p.5, para.1	It is important that this plan clearly state that conservation is a goal, and that it note that not all subpopulations are increasing across Canada or even across Nunavut. There should be some recognition of environmental changes. Finally, the term "over-abundance" implies a judgment, suggest replacing with "increased populations" (or equivalent) when it's appropriate to do so. This term should be replaced throughout the document (e.g. page 11, paragraph 3 also).
p. 5, para. 2	The various possible reasons for an increase in human-bear interactions should be added; it is not accurate to point to only one possible cause. Increased interactions could also be due to changes in the distribution of bears from being on sea-ice to being on land for longer periods, and also a change in Inuit settlement away from a primarily nomadic lifestyle to one with established communities and therefore an increase in attractants for bears.
p. 5, para. 2	It would be helpful for the reader if the document were to provide a definition of carrying capacity and the evidence indicating that it has been reached in some areas, as noted. This is a poorly understood concept as it relates to polar bears and data are lacking overall.
p.6, para.1	It is recommended to replace Denmark with Greenland as Greenland is responsible for its natural resources and is the relevant party to the <i>Agreement on the Conservation of Polar Bears</i> .
p.6, para.1	Please correct typo - the agreement is not the " <i>International Agreement on the Conservation of Polar Bears and their habitat</i> " (delete the words "international" and "and their habitat"). It needs to be made more explicit that the "existing polar bear management regime" is not referring to the 1973 Agreement.
p.6, para.2	As per the above, the point that "...polar bears have increased in numbers over the last 50 years", should be qualified. Some subpopulations have undoubtedly increased over the last 50 years, but the status of subpopulations across Canada, even across Nunavut, varies – some have increased, some have declined. It's also important to keep in mind that early global population estimates were extremely poor due to a lack of data and many assumptions. It was not until research began in the 1970s that there was enough information to be able to say approximately how many polar bears are in Canada or the world. Comparing the previously poor estimates with the newer ones is not recommended. Same sentence: what "environmental changes" are polar bear expected to be highly adaptable to? What evidence/data/information sources are/is

	being cited here?
p.6, para.3	Since the plan makes frequent reference to managing at the subpopulation level it may be beneficial to add the following principle, "Polar bear will be managed at the subpopulation level, and their status will be assessed regularly to ensure that information is available for timely conservation, and towards long-term sustainability." This is taken from the <i>National Polar Bear Conservation Strategy for Canada</i> which was approved by the Nunavut Wildlife Management Board in September 2011.
p.6, last bullet	This is an important guiding principle and Nunavut should be commended on its inclusion.
p.7, 2nd bullet	Could be deleted because presumably this is covered by the first bullet where viable and healthy subpopulations will be maintained. It is also covered in guiding principle number 4.
p.7, last bullet	This is not really a goal but rather part of the management process. This point is covered in guiding principles number 1 and 2 therefore we suggest removing it.
p.7, 4.1 Status	Would be useful to include year for status under SARA (2011) and IUCN (2008). We also suggest the document indicate that the polar bear is not listed as a species at risk under the Nunavut Wildlife Act.
p.8, para.1	It's recommended to use "seasonal fidelity" rather than "seasonal commitment". Is this statement based solely upon scientific data? What does IQ say about movement of bears? It is advised to include information from both scientific and IQ studies wherever possible throughout the document.
p.8, para.3	Please correct - It is Viscount Melville Sound not Viscount Melville. The Southern Beaufort Sea subpopulation does not occur within Nunavut. "Southern Beaufort Sea" should be changed to "Northern Beaufort Sea", which is missing in the list of 12 Nunavut subpopulations.
p.8, para.5	Pregnant females in both Western Hudson Bay and Southern Hudson Bay are denning prior to significant snowfall – in neither subpopulation do females dig maternity dens in snowbanks.
p. 9, Figure 1	Please update the map to show the new NB – SB subpopulation boundary. Several names in the figure legend need to be updated (Viscount Melville Sound not Viscount Melville, Northern Beaufort Sea not Northern Beaufort, Southern Beaufort Sea not Southern Beaufort).
p.9, para. 1	Both science and IQ have documented predation by wolves – this is another opportunity to show agreement between the two knowledge sources. There is mention of "different challenges" associated with the different polar bear life stages – please provide examples.
p. 10, para. 4	Please replace wording "energetic marvels" with more neutral terminology, such as 'well-adapted'.
p.10, para.5	Consider rewording to state that they can spend the majority of their lives offshore.
p.10,para.6	Suggest adding "Nunavut" before "Wildlife Act"

p.11, para.2	It is important that the plan reflect the latest data from the 2015 PBTC status table (provided). The recent trends for the subpopulations can be summarized as follows: 3 uncertain, 1 likely decline, 4 likely stable, 2 stable, and 2 likely increase thus one third of Nunavut subpopulations are either data deficient or in decline.
p.11-12, Sect.5.3	<p>The role of the Government of Nunavut is unclear in this section. It is suggested that the 3rd paragraph on page 12 starting "The Nunavut Wildlife..." be moved to follow paragraph 1 and that it be expanded to describe the role of the Department of Environment and the fact that the Act also addresses compliance and enforcement.</p> <p>The following change is suggested to clarify that it is Article 5 that defines roles:</p> <p>In Nunavut, wildlife is managed according to Article 5 of the Nunavut Land Claims Agreement. Article 5 sets out the creation of the Nunavut Wildlife Management Board (NWMB), which is the primary instrument of wildlife management in Nunavut. Article 5 defines the roles of the NWMB, government, Hunters and Trappers Organizations (HTOs), and Regional Wildlife Organizations (RWOs).</p>
p.12, para.1	Since this document was written the Range States have adopted the Circumpolar Action Plan: Circumpolar Conservation Strategy for the Polar Bear. This Plan was adopted in September 2015. You may wish to update this section accordingly and provide some details on the 10 year plan.
p.12, para.2	Suggest stating that the Nunavut plan, in part or in whole, is intended to form part of the SARA management plan along with other provincial and territorial plans. There may also be federal additions or the exclusion of sections from provincial/territorial plans that are not required in the federal plan.
p.12, para.3	Reference is made to the Memoranda of Understanding (MOUs) for all 12 subpopulations. The document states that these MOUs will be replaced with this management plan. It would be helpful to provide the reader with additional detail on how and when this will occur.
p.12-13, Sect. 6	<p>6.2 NWMB: This paragraph states that the NWMB's role consists of setting Total Allowable Harvest rates (TAH) and Non-Quota Limitations as well as approving management plans.</p> <p>6.4 HTOs: It would be helpful to define "non-quota limitations" and to describe their role related to sport hunts</p> <p>6.5 GN-DOE: This paragraph has a high level sentence that states that the Minister of Environment retains the ultimate authority over wildlife management in Nunavut as per the NLCA. It goes on to say that DOE staff make management recommendations to the NWMB for decision.</p> <p>For national and international audiences it is important that additional text be provided which explains what retention of ultimate authority over wildlife management in Nunavut means in practice. As written, the paragraph conveys that the NWMB makes the decisions on wildlife</p>

	<p>management based on input from DOE staff members. It is suggested that the wording of the NLCA be quoted rather than paraphrased so that the authority of the GN-DOE and its Minister are clear. This would be beneficial for this section as well as the others throughout section 6. It is critical that roles regarding management and quotas are clear.</p> <p>This section could be expanded to make reference to the Parks Canada Agency and Environment Canada. The following text is provided as a suggestion:</p> <p>Under the federal <i>Species at Risk Act</i> (SARA), Environment Canada is responsible for completing a national management plan for polar bears. The Government of Canada has responsibilities for the management of listed species such as polar bears where they occur on federal land. The Government of Canada is responsible for managing polar bears and their habitat on federal lands under the jurisdiction of the federal Minister of Environment (National Wildlife Areas and Migratory Bird Sanctuaries) and Minister responsible for the Parks Canada Agency (National Parks, National Park Reserves and National Historic Sites). The Government of Canada contributes to scientific knowledge of polar bears through research and helps to coordinate polar bear management across the country. Canada signs international agreements on behalf of all jurisdictions and has responsibilities to coordinate international management actions for polar bears, with the advice of the co-management boards and jurisdictions. It is therefore involved in international polar bear management fora including the Convention on International Trade in Endangered Species (CITES) and the 1973 <i>Agreement on the Conservation of Polar Bears</i>. Polar bears are listed under Schedule I of the <i>Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act</i> (WAPPRIITA), which is the legislation through which Canada meets its international obligation under CITES. Environment Canada's Enforcement Branch - Wildlife Enforcement Directorate is responsible for enforcing laws that protect and conserve migratory birds, and protect habitats and endangered species under federal mandate.</p>
p.13, Sect. 7	Were other issues (e.g., disease, hybridization) considered and dismissed as being of little importance at this time? If so, perhaps this could be indicated.
p.13, para.4	If this management plan is to be SARA compliant, the plan must refer to the threats facing the polar bear. Typically a SARA management plan includes a threat assessment to identify the spectrum of potential threats to the species at the population-level, and to their habitat. In so doing, only present and future (within a 10-year timeframe) threats are considered. Discussion of the threats in this manner will enable the

	<p>prioritization of recommended management and other actions to prevent the polar bear from becoming threatened or endangered. Each sub-population may have a similar suite of threats, but they may differ in order of importance from one subpopulation to another. EC staff can, upon request, provide more guidance on how this could be done.</p> <p>It is suggested that this section be sub-divided into "Threats" and "Challenges," so that the suite of threats is discussed first, followed by the challenges.</p> <p>The conservation issues and challenges associated with industrial activity are very different than those associated with tourism. The issues associated with shipping are also very different than those related to mining or oil and gas extraction. It is suggested that the grouping of the issues (threats) be re-considered and that discussion of the threats be done in the order of importance.</p>
p.14, para.2	Increased human activity is also due to increasing population size in the North (both increasing Indigenous populations and settlement of non-Indigenous people).
p.14, para.5	Consider qualifying the statement that climate change is affecting both terrestrial and marine environment, but the impact on polar bears is not clear at this time. Certainly the impact will vary both in space and time, but there is a wealth of literature focused on the impact of climate change on polar bears. This statement is not accurate as written.
p. 15, para. 2	"bird sanctuaries" should be replaced with "Migratory Bird Sanctuaries".
p. 15, Sect.7	7.4 Population boundaries, 7.6 Inter-jurisdictional considerations, 7.7 International trade, and 7.8 Harvest coordination are topics that do not fit well under conservation issues that the polar bear faces like the other topics in this section (industrial activity and tourism, pollution/contaminants, and habitat alteration (climate change)). As stated previously it may be best to sub-divide the "Conservation Issues and Challenges" section into "Threats" and "Challenges".
p.15, para.3	Please clarify. As written, this text seems contradictory to that on page 8 which notes bears do not wander throughout the Arctic and show seasonal fidelity to specific regions. Note that researchers also believe that bears travel between subpopulations (e.g., Hudson Bay complex), although they are not likely to travel great distances (e.g., from Davis Strait to the Northern Beaufort Sea).
p. 15, para. 5	As stated earlier, consider wording to reflect that some subpopulations have increased due to a variety of reasons not just "thanks to more rigid harvest monitoring and controls..."
p. 15, para. 5	The sentence pertaining to the application of DLP kills to the quota is not clear: "However, they do not increase the overall harvest because they are not added to the existing harvest". Suggest wording along the lines of

	"a higher number DLP kills means that fewer bears available for harvest"
p. 16, para. 1	Note: While Inuit have certainly been caching food in traditional meat caches for centuries, they were not traditionally located within such a restricted geographic area as they are now (i.e. within or nearby communities), which will serve as a heightened attractant for bears.
p. 17, Sect.7.7	<p>Specific edits are proposed to improve the text on CITES:</p> <p>The following wording is suggested (given the assumption that the primary goal is sustainable harvest; the international trade options are a benefit not the driver):</p> <p>As of 2015, the international export of polar bears from Canada is considered non-detrimental (with the exception of export of bears harvested from the Baffin Bay subpopulation). Significant efforts have been made towards ensuring sustainable harvest by all stakeholders to support a finding of non-detriment.</p> <p>The following text should be moved down as shown here: "Given the shared jurisdiction for wildlife in Canada, coordination among provincial and territorial jurisdictions is also required to ensure that total removal by all jurisdictions from shared subpopulations is sustainable and defensible at the national and international level. The ongoing domestic and international export of polar bear parts, such as hides, depends on sound harvest reporting and sustainable harvest levels. These rules must apply to all jurisdictions if they are to be successful. Ensuring strict reporting of all mortality and maintaining adequate harvest records should be a benchmark for all jurisdictions. In Nunavut, this is currently done, and export from Nunavut continues as the result of the combined efforts of stakeholders. Communities have unanimously supported sustainable harvest decisions as integral to a finding of non-detriment because international trade is an important component of community economic development. The CITES Appendix II listing has a positive impact on conservation efforts in that the economic benefit from international trade provides an/another incentive to support management, particularly abundant subpopulations."</p>
p.17, Sect. 7.8	Consideration should be given to adding back into this plan the Enforcement section found in previous drafts. It might be beneficial to broaden this section. If the title were changed to "Regulating and Coordinating the Harvest", it could also explain the issues of sport hunts, compliance promotion and enforcement.
p. 18, para. 3	As noted earlier, an increasing number of interactions between humans and bears could be caused for various reasons. Similarly, an increasing Inuit population throughout Nunavut could also have an impact on seal numbers, waterfowl, etc., so consideration should be given to qualifying/rewording this statement.

p.19, para.5/6	<p>Please clarify and expand this section so it is clear what management actions would be taken in each scenario. Note that the scenario of a stable population is missing and should be added. In this situation if the objective is to maintain the population at the current level presumably the action would be to maintain the current harvest conditions unless there is evidence of declining body condition, recruitment etc.</p> <p>Please also explain what actions would be taken if science and <i>Inuit Qaujimaqatuqangitare</i> are not in agreement.</p> <p>It is noteworthy that the management action includes the word 'may'; in other words in the case of a declining population, there "may" be no reduction in TAH. In such a situation, if the objective is to increase or maintain the population, then the necessary actions will be a reduction in the TAH.</p> <p>Where there is an increase in a population and the objective is to decrease or maintain the population, another action could be to eliminate the need for a sex selective harvest and maintain the TAH.</p>
p.19, para.9	<p>In line with the comment above, it is crucial to explain how sex-selective harvest will be managed under each scenario. It is also important to explain that switching to a 1:1 sex ratio of the harvest will almost certainly mean a reduction in TAH, so this is not consistent with the goal of maximizing the sustainable harvest. This needs to be explicitly stated.</p>
p. 19, para.9	<p>As written, it would appear that some subpopulations could end up with one or more communities adopting an equal sex ration harvest while others may continue to use the sex-selective harvest approach, which would result in an unmanageable situation.</p> <p>Unless it can be demonstrated to be workable, a sex-selective harvest, or a non-sex-selective harvest regime, should be established for the entire subpopulation, not on a community-by-community basis.</p>
p.20, para.1	<p>Appendix D is the current flexible quota system, not a revised one. It should be clarified which system will be used for each subpopulation, and explain any revisions.</p>
p.20, Sect.8.1.2	<p>Given that the text in this section includes harvest reporting, it is suggested that the heading be changed to "Harvest Monitoring and Reporting"</p> <p>Environment Canada has been working in collaboration with the Nunavut Department of Environment on an initiative entitled, "Three-Pronged Approach to Sampling, Testing & Tracking for Enforcement and Conservation Purposes". It is suggested that the following text (or similar) be added to reflect this work:</p> <p>Polar Bears are listed under Schedule I of the <i>Wild Animal and Plant</i></p>

	<p><i>Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA)</i>, which is the legislation through which Canada meets its international obligations under the <i>Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)</i>. This ensures that trade is strictly regulated so that it remains legal, sustainable, and traceable.</p> <p>The sustainable harvest and trade of polar bears and derivative products is permitted and may contribute to the livelihood of Northern communities who depend on polar bears for sustenance. By contrast, poaching and illegal wildlife trafficking can have a negative impact on polar bear populations.</p> <p>Environment Canada is leading an initiative to test and track legally-harvested polar bears across the country, which will be done in collaboration with conservation officers in relevant jurisdictions. The following three methods will be used: DNA testing, Stable isotope analysis, and Pit-tagging (insertion of microchips into the hides).</p> <p>Co-management partners of the Nunavut government are committed to conducting scientific sampling of polar bears immediately following their harvest (either obtained from currently-required samples or from the larger hide, for DNA testing and Stable isotope analysis), and to further assist in the tracking of specimens (through Pit tagging and input to a centralized database), thereby ensuring that trade remains viable. These initiatives will support compliance efforts, contributing to continued protection of the species.</p>
p.21, bullet 10	For greater consistency between the points, it may be desirable to add the text from bullet 10 starting with "...where needed and supported by communities..." to bullet 6.
p.21, para.2	Suggest replacing "objectives" with "actions" to avoid confusion with previous use of the word
p.21, para.3	While important to collect harvest statistics, it may be useful to include wording noting that samples collected from harvest need to be analyzed and reported on in a timely manner to further aid management decisions.
p.22, para.2	Suggest rewording line on compensation so it reads "by the appropriate government authority" to reflect that sometimes this will be Government of Nunavut and other times it may be Government of Canada (if the bear is killed in a national wildlife area, etc.)
p.22, para.4	Suggest adding National Wildlife Areas
p.23, Section 8.5.2	It would be beneficial to provide a list of the relevant agreements
p.24,	4 th bullet: The following edit is proposed to clarify roles, recognizing that

para.2	<p>Nunavut is responsible for implementing the plan and the others have an interest in its implementation:</p> <p>Continue to improve coordination between different levels of government and partners. Environment Canada, Parks Canada Agency, the Nunavut Department of Environment, RWOs and HTOs all have a role and an interest in implementation of this plan.</p>
p.24, para.5	<p>As noted before, the adoption of a non-sex selective harvest system would require reductions in TAH levels that are currently maximizing harvest opportunities. This needs to be clearly communicated.</p>
p.24, Sect.9	<p>In order for this plan to be adopted in the SARA Management Plan, it is important that Appendix C be expanded so that it is a clear commitment to action. Specifically, the table should be expanded upon so that for each action, there is an indication of the objective(s) being addressed, the priority of the action, the threats addressed, the participating agencies and the timeframe. This is not a difficult task and would further serve to evaluate the performance of the plan (section 10).</p>
p. 25, para. 1	<p>It is suggested that all of the plan's objectives be consolidated into a table and be referenced in the Plan Review Section.</p> <p>How will an annual review of the plan's progress and actions be carried out?</p>
Appendix A	<p>It is suggested that the latest PBTC table be used and that the date of the table (2015) be stated, given that this plan will be in place for several years. A copy of the latest PBTC assessment is provided, together with this document, for your reference. It is suggested that text be added to the Appendix which indicates that the table is updated annually and made available to the general public. It is suggested that Appendix A include data from the 2015 table and the following: Population estimate, +/- SE or 95% CI, Year of Population estimate, Historic trend, Recent trend, Local and/or TEK assessment, and that Appendix B refer to that information.</p>
Appendix B	<p>The information in this Appendix will quickly become out of date. To avoid confusion it is suggested that a link to a website with this information be added, so readers can easily access the latest information.</p> <p>If the Appendix is not deleted, edits below should be considered: In the subpopulation recommendations part for each subpopulation, "review management objective and TAH when a new inventory study is complete" is included but the Brief History part does not always mention if and when a new inventory is planned. Therefore, it is suggested that either the planned new inventory is mentioned in the brief history for each subpopulation and/or a sentence is added at the beginning of Appendix B</p>

	<p>that states that the inventory schedule for the subpopulations is presented in Appendix E.</p> <p>The TAH for M'Clintock Channel needs to be corrected to 12.</p> <p>Question regarding Davis Strait: 32 is noted for Nunavik – is this based on a voluntary limit or other agreement? Otherwise, it is not accurate to put a limit.</p> <p>In each subpopulation description, "Science" refers to the Status column in the old PBTC table information provided in Annex A. PBTC no longer has a Status column. When it did, presumably, the status was solely based on science information (did not include local/TEK info) and presumably that is why the word science is used. If the 2015 PBTC table were used, "science" would still be appropriate to use for "recent trend," for example, because recent trend is based on population estimates from science papers (and sometimes other lines of evidence if necessary). However, the other lines of evidence do not include local/TEK. It is all science.</p> <p>The brief history text for Western Hudson Bay is confusing and would benefit from being re-written:</p> <p>The subpopulation was estimated to be 1,194 in 1987 and 935 in 2004. Before 1998, the subpopulation had apparently remained the same, indicating that DOE research, conducted using aerial surveys in 2011, provided a new estimate of 1,030 bears. However, this estimate and the previous one have overlapping confidence intervals, suggesting no change, although techniques of past research projects differed.</p> <p>The science status does not agree with the most recent PBTC status table in some of the subpopulations. As an example, Davis Strait is likely increased (historic trend) and likely increased (recent trend); management plan shows a science status of 'not reduced'.</p>
Appendix C	<p>The Appendix outlines potential actions where additional effort should be directed. It states that these are directions for co-management partners and are not to imply actions that will be undertaken. It then goes on to say that they are a starting point for further discussion and collaboration. As stated, there are no timelines or commitments to ensure that they are completed within the 7 year life of the Plan. In order for this Plan to be consistent with SARA, there should be a commitment to specific actions and the associated timeline of each. The Bowhead Whale Management Plan (http://www.registrelep.sararegistry.gc.ca/virtual_sara/files/plans/mp_baleine_boreale_bowhead_0214_e.pdf) is a good example of an implementation schedule for specific actions to address the objectives. Environment Canada is willing to assist with completion of this table and indicate where it is already, or could in</p>

	the future, participate. The Parks Canada Agency could also likely contribute in this regard.
p. 34, last line Appendix C	See p. 24, Sect.9 comment above. Suggest using "Environment Canada" after "...such as Parks Canada..." rather than "Canadian Wildlife Service"
Appendix D	As per the comment above, the Plan needs to be clear on how it will be decided when the current sex-selective system would be used, vs the 1:1 ratio, and what would be the effects on TAH. The Appendix describes the current flexible quota system that was developed a number of years ago. The new management plan proposes a 1:1 sex ratio in situations where communities want it. It is suggested that this Appendix be modified to explain the implications of moving to a non-sex-selective harvest in terms of the TAH and credits for subsequent years.
Appendix E	As noted, we recommend a change on page 21 so that section is consistent with the wording here regarding population inventories. It is good to see this information included here.
Appendix F	The title of the section should be revised so that the year the information is from is clear. If the table is from 2014 or newer, the voluntary agreement for Southern Hudson Bay should be added.