

മേൽ 1, 2010

ፖሊስ ሰራተኛው ለጥቅም  
ጥቅም ላይ ላልዋል  
ፖሊስ ሰራተኛው ለጥቅም  
ፖሊስ ሰራተኛው ለጥቅም  
K1A 0A6

Γ<sub>1</sub>C > α<sub>1</sub>Π<sub>1</sub>α<sub>2</sub>Δ:

[illegible]

1.  $\Delta L \ll \tau \ll \Delta L^2$   $\Delta L \ll \tau \ll \Delta L^2$

[illegible][illegible][illegible][illegible]

2. ዳኅረተሰራተራሴ ለኋለኞቹ ደመልሶጋብጦ ልረጋውኝኛል

[illegible]

- [illegible]

3. ለፋይናንስ ሚኒስቴር ለሚሰጥ የፋይናንስ ሚኒስቴር ስልጣን ማረጋገጫ ሰነድ

[illegible][illegible][illegible]

- [illegible]

[illegible]

[illegible]

4.  $\frac{d}{dt} \left( \frac{1}{2} m v^2 \right) = \frac{d}{dt} \left( \frac{1}{2} m c^2 \beta^2 \right)$

[illegible]

#### 4.1 ስለፍጥነት ለውጥ ማረጋገጫ ጥናት

- 3





"ድህረፈር፣ ፍልጋሮ፣ ፍሪፋላ፣ ላረፈር፣ ላልፈር፣ የሮጋጋፈር ላሊጋ ላረጃጃፋር ማሞላጉኝኝኝ ሙሙፈር (ገንጌላ ላሊጋ ላጎረጎረ 1977; ሞላፈር ላሊጋ ገንጌላ 1978; ሮፈር 1982; ኃሊ ላረኝኝ 1987; ፍጋጋ ላሊጋ ገንጌላ 1990; ሞላ ላሊጋ ገንጌላ 1990; ኃሊፈር ላረኝኝ 2002); ሞላፈር ፍልጋኝገሊጊጊ ፍልጋረጃኝ ላሊጋ ሙፍፍፍፍፍ ለሞላፍገጋጋ ፍልጋረጃኝ ሞላፍገሊጊጊ ሊፈ ሞላፈር ለኃሊጋፈርጋጋ ገረ ሞላፈር ሞላፈር ሞላፈር (ገንጌላ ላሊጋ ላጎረጎረ 1977; ሞላ 1980; ሊፈፍ ላረኝኝ 1997)." (ፍልጋረጃኝፍ ሞላፍ፣ ሊፈፍ 14)

- 4.1.1  $\Delta^C \wedge C^b \supset \Delta^L \supset \wedge C^b \supset C^b \supset \sigma^a$

- 5



- [illegible]

## 4.2 ሥርዓተ ምግባርና ምግባር ለሥራ ምክንያት

- [illegible]



[illegible][illegible]

- [illegible]



- [illegible]

[illegible]

- [illegible]

[illegible]

[illegible]

**5.1**     $\Lambda^{\flat} \prec_{\mathcal{C}} \Delta^{\flat}$      $\dot{\Delta} L \prec_{\mathcal{C}} \Delta^{\flat}$      $\Delta^{\flat} L \prec_{\mathcal{C}} \Delta^{\flat}$

12

[illegible]

[illegible][illegible][illegible]
$$\Delta C^a \cdot \mathcal{D}^c \quad \mathcal{A} C \nabla \Gamma^b,$$
$$\partial \Delta \subset \partial dL$$

3. ΔC adC<sup>5b</sup>,  
 ΔC'CD(CbΔ<sup>a</sup>Q<sup>5b</sup>) ΔCσ  
 ΔC>Γ ΔLΔCΔC'ΔC' bNLΔC'

$$\Delta_{\text{c}} \rho_{\text{c}} \gg \rho_{\text{L}} \ll \rho_{\text{c}} \quad (1)$$



DΔC a d c<sup>b</sup>  
 Δ<sup>b</sup> P Δ C D b Δ<sup>a</sup> Q<sup>b</sup> D<sup>b</sup>  
 Δ Q<sup>b</sup> L Δ<sup>b</sup> L Δ C L Δ<sup>b</sup> d<sup>c</sup> b N L Δ<sup>b</sup> L Δ<sup>c</sup>  
 N N<sup>b</sup> S<sup>b</sup> Δ<sup>c</sup> Δ<sup>b</sup> 1379  
 Δ<sup>b</sup> Δ<sup>c</sup>, Δ Q<sup>c</sup>  
 X O A O H O

▷ ΔC  $\dot{a}$  dC<sup>a</sup> J<sup>C</sup>:

[illegible][illegible][illegible][illegible]

[illegible]

2.  $\Delta \sigma^a \sigma^c \triangleright \omega \triangleleft a^{\epsilon b} \triangleright^{\epsilon b} \omega \triangleleft^{\epsilon b} \sigma^a \sigma^{\epsilon b}$

[illegible]

3.-Г<sup>b</sup> 5.-J<sup>c</sup>. а-а<sup>a</sup>σ<sup>a</sup>ρ<sup>c</sup> ρ<sup>c</sup>Δ<sup>c</sup> Δ<sup>a</sup>ρ<sup>b</sup>σ<sup>b</sup><<sup>c</sup>c<Δσ<sup>a</sup>ρ<sup>a</sup>-D<sup>c</sup> асΔ<sup>c</sup>C<sup>b</sup>(CΔ)LJ<sup>c</sup> Δ(L)

$\Delta b \leq \epsilon b \iff C \preceq^c C \preceq C \preceq \Delta^a a \wedge \Delta^b b \leq \sigma^a r^c \iff \Delta^c r^a \leq^c a \leq^c \sigma^a \leq^c$

[illegible]

5.-፲፭ 7.-፲፭ ለፈገገኛና ለፋሽስት ሚኒስትሮችና ለሌሎች ሰነድ ማረጋገጫ

$\Delta L \rightarrow a \cdot \Delta C \rightarrow \Delta \sigma^2 \rightarrow \Delta \rho^2 \rightarrow \Delta \sigma^2 \rightarrow \Delta \rho^2 \rightarrow \Delta \sigma^2 \rightarrow \Delta \rho^2$

[illegible]

[illegible][illegible][illegible][illegible]

10. ነፅላለኝነት ማስጠበቅና የደንበኞች አገልግሎት ማረጋገጥ

[illegible][illegible][illegible][illegible]









Tammaqtainahuarinirit anngutighat atuqhugit Inuit qaujimajatuqangillu ilihmaniillu ilitquhiannin  
Conserving wildlife through the application of Inuit Qaujimajatuqangit and scientific knowledge

Δ<sup>5</sup> 29, 2011

ሥራዊዳኝን ለርዕዮ  
ገጽጽህህ ልዩበርብኝ  
ላረጃልላኝ ሲባል  
10 ንልላረጃላኝ ልዩበርብኝ, 28 ዓ.ም.  
ሲባል, ልላላ  
K1A 0H3

Γ<sup>5</sup>C ρ<sup>Δ</sup>c<sup>α</sup>υ<sub>Δ</sub>:

[illegible][illegible][illegible][illegible]

2.  $\Lambda^b \triangleleft \langle \Delta^c \rangle \cap \Gamma \sigma^b \langle \Delta^c \rangle \triangleleft \Delta^{a+b} \cup \Gamma \sigma^b \langle \Delta^c \rangle$ ,  $\Delta^L \cup \Delta^R \triangleleft \Delta^L \cup \Gamma \sigma^b \langle \Delta^c \rangle \triangleleft \Delta^{a+b} \cup \Gamma \sigma^b \langle \Delta^c \rangle$

[illegible]

- [illegible]





[illegible][illegible]

3

ደራሲዎች ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል። ለዚህም ምሳሌ ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።

6. ርዕሰ ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል። ለዚህም ምሳሌ ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።

በሀገራችን ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል። ለዚህም ምሳሌ ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።

7. ርዕሰ ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል። ለዚህም ምሳሌ ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።

በሀገራችን ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል። ለዚህም ምሳሌ ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።

"...ርዕሰ ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል። ለዚህም ምሳሌ ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።

**3. ለሀገራችን ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።**

ደራሲዎች ለሀገራችን ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።

1. ርዕሰ ልማት ስራው ለሀገራችን ልማት ምክንያት ሊሆን ይችላል። ለዚህም ምሳሌ ለፊት የሚገኝ የፅንፈኝነትና ልሳንነት ምክንያት ለሀገራችን ልማት ምክንያት ሊሆን ይችላል።









[illegible]

W. J. Clark

$$\Delta^C \rightarrow \Delta^C \rightarrow \Delta^C \rightarrow \Delta^C \rightarrow \Delta^C \rightarrow \Delta^C$$

መፅኀፍ ክርስቲያን ምኅራፍ ልግሳስ

(i) ከጥቅምት 1, 2010 ለየተሰማራ ትራንስፖርትና የልማት ልማት ዘመናዊ መንገዶች ምክር ቤት አባልነት ሲያገኙ በአጠቃላይ

(ii) ᐱᓯᔭᑦ 23, 2010 ᐅᕈᖃᐸᓂᒃᑐ ᐳᐴᕆᕋᐣ ၵᓄᕊᑲᕏ.



Tammaqtailinahuarnirrit anngutighat atuqhugit Inuit qaujimajatuqangillu ilihimanillu ilitquhiannin  
Conserving wildlife through the application of Inuit Qaujimajatuqangit and scientific knowledge

മലയാളം 1. 2010

ᐱᓕᑦᑲᑦᑐᑦ ᐱᓚ ᐸᓚᑎᑏ  
ᐱᓕᑦᑲᑦᑐᑦ ᐳᓕᑎᓕᓚᑦ  
ᐱᓕᑦᑲᑦᑐᑦ ᐳᓕᑎᓕᓚᑦ  
ᐳᓕᑎᓕᓚᑦ ᐳᓕᑎᓕᓚᑦ  
K1A 0A6

Γ<sup>5</sup>C > α<sup>5</sup>Π<sup>5</sup>Δ:

[illegible]

1.  $\Delta L \ll \lambda \Rightarrow \Delta \theta \approx \frac{\Delta L}{\lambda}$

[illegible][illegible][illegible][illegible]



2. ጥንታዊ የግብርና ልማት ስልጣን ለሰጠው ልማት ስልጣን

[illegible]

- ለኅዝቡን ስለሚገኝ ልማት፣ ልማት ለማሳደግና ለማሳደግ ይረዳል።
- ሌሎችም ልማት ለማሳደግ ይረዳል። (ለሌሎችም ልማት ለማሳደግ ይረዳል።)
- ሌሎችም ልማት ለማሳደግ ይረዳል። (ለሌሎችም ልማት ለማሳደግ ይረዳል።)
- ሌሎችም ልማት ለማሳደግ ይረዳል። (ለሌሎችም ልማት ለማሳደግ ይረዳል።)

3. ለኢኮኖሚክስ ሊቀ መምህራን የሚሰጠው የፋኩልቲ ማስተማሪያ ስልጠና በጥንቃቄ ይከተላል፡

[illegible][illegible][illegible]

- [illegible]

[illegible]









[illegible]

- [illegible]

4.1.1  $\Delta^C \wedge C^{\circ} \nabla L \wedge C^{\circ} \nabla \sigma^{\circ}$

- [illegible]





- [illegible]

4.2  $\Gamma \vdash \Delta^{\text{q}} \text{d} \Gamma^{\text{p}} \text{c} \text{d} \sigma^{\text{u}} \quad \Delta \text{L} \cup \text{c} \text{d} \Delta^{\text{c}} \text{c} \text{d} \text{L}^{\text{p}} \text{c}$

- [illegible]





ፈረንሳይ ጥቅምተኛነትና የዕለል ልማት ስርዓት ይጀምራል። (መታየት/ስራ ስራ ልማት ስርዓት, ከበላውያን ጋር, ሊገኝ 99-100, መታየት 6-3)

- [illegible]

4.3  $\Lambda \triangleright \triangleright \cup \triangleleft^s \triangleleft^a \sigma^a \gamma^c$

- [illegible]

[illegible]

- [illegible]





- [illegible]

[illegible][illegible][illegible]



ልረጅ ርልሌ ላይ ለሚገኙት ምክር ቤቶች ማሳሰቢያ ማድረግ፡፡ ለጥቅም ላይ የዋለው ሰነድ ለሚገኙት ምክር ቤቶች ማሳሰቢያ ማድረግ፡፡

ርልሉ የሚገኙት ምክር ቤቶች ለሚገኙት ምክር ቤቶች ማሳሰቢያ ማድረግ፡፡ ለጥቅም ላይ የዋለው ሰነድ ለሚገኙት ምክር ቤቶች ማሳሰቢያ ማድረግ፡፡

ርልሉ የሚገኙት ምክር ቤቶች ለሚገኙት ምክር ቤቶች ማሳሰቢያ ማድረግ፡፡ ለጥቅም ላይ የዋለው ሰነድ ለሚገኙት ምክር ቤቶች ማሳሰቢያ ማድረግ፡፡

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Tammaqtailinahuarniriit anngutighat atuqhugit Inuit qaujimajatuqangillu ilihmaniillu ilitquhiannin  
Conserving wildlife through the application of Inuit Qaujimagatugangit and scientific knowledge

The Hon. Jim Prentice  
Minister of Environment  
House of Commons  
Ottawa, Ontario  
K1A 0A6

**Re: Decision of the Nunavut Wildlife Management Board concerning the proposed listing of polar bear as a species of special concern under the *Species at Risk Act***

From April 13<sup>th</sup> to 15<sup>th</sup> 2010, the Nunavut Wildlife Management Board (NWMB or Board) held a public hearing in Iqaluit, Nunavut, for the purpose of publicly considering the proposed listing of polar bear as a species of special concern under the *Species at Risk Act* (SARA). In attendance as parties at the hearing were distinguished Elders from across Nunavut, representatives from the Government of Nunavut's Department of Environment (DOE), Environment Canada's Canadian Wildlife Service, Nunavut Tunngavik Incorporated (NTI), the Qikiqtaaluk Wildlife Board (QWB), the Kitikmeot Regional Wildlife Board (KRWB), the Kivalliq Wildlife Board (KWB), and a number of Hunters and Trappers Organizations (HTOs) from the three regions of the Territory. In addition, the Chairperson of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) attended as an expert witness, at the request of the NWMB.

On September 14<sup>th</sup> 2010, the NWMB held a decision-making meeting in Iqaluit. After taking into careful account all of the relevant oral and written evidence and arguments submitted, the Board passed the following resolution:

***“RESOLVED that the NWMB not approve the listing of polar bear as a species of special concern under the federal Species at Risk Act.”***

Before proceeding to set out the Board's reasons for decision, I wish to apologize on behalf of the NWMB for late delivery of the decision. In an August 31<sup>st</sup> 2010 letter to the Board, your Acting Assistant Deputy Minister, Ms. Wright, requested receipt of the decision by September 30<sup>th</sup>. Unfortunately, the Board has had to deal with a number of urgent issues – including completion of this decision letter – during the month following its September meeting. While we were not able to meet the requested timeline, I do wish to assure you that the NWMB has consistently treated this matter as a priority.



## **2. COSEWIC'S REASONS FOR ITS DESIGNATION OF SPECIAL CONCERN**

Pursuant to the terms of SARA, a listing of “*special concern*” is justified when a wildlife species “... *may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.*” By way of brief summary, the reasons for COSEWIC’s designation of special concern are the following:

- With respect to biological characteristics, polar bears have evolved to take advantage of killing seals from a sea ice platform.
- The over-arching identified threat to polar bears is climate warming, which is predicted to continue to melt Arctic sea ice during the coming decades.
- Other identified threats are over-harvest, pollution and increased industrial activity in the Arctic.
- That combination of biological characteristics and identified threats will cause declines in polar bear numbers, leading to polar bears becoming threatened or endangered if the threats to them are not reversed or managed with demonstrable effectiveness.

## **3. THE IMPORTANCE OF INUIT QAUJIMAJATUQANGIT IN CONSIDERING THE PROPOSED LISTING OF POLAR BEAR AS A SPECIES OF SPECIAL CONCERN**

In considering and deciding upon the potential classification of polar bear as a species at risk, COSEWIC is required by SARA s.15(2) to do so on the basis of the best available scientific knowledge, community knowledge and aboriginal traditional knowledge (*Inuit Qaujimajatuqangit* or IQ). For its part, the NWMB is required to apply both IQ and scientific knowledge in carrying out its functions under the *Nunavut Land Claims Agreement* (NLCA – see, for instance, NLCA S.5.1.2(e), 5.1.3(a)(i) and (b)(i), (iii) and (v), 5.1.4 and 5.1.5). All of this is in keeping with specific Canadian national and international commitments to recognize the value of aboriginal traditional knowledge.<sup>1</sup>

It is therefore essential that COSEWIC, the NWMB, the Environment Canada Minister and the Governor in Council carefully consider, and assign appropriate weight to, the significant contributions from IQ and *qaujimaniliit* (persons recognized by their communities as possessing in-depth IQ) in the examination of whether polar bear should, at this time, be listed as a species of special concern.

The 2008 *COSEWIC Assessment and Update Status Report on the Polar Bear in Canada* (STATUS REPORT) is one very helpful source to assist the decision-makers in conducting their due diligence examination and in reaching their conclusions:

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<sup>1</sup> See the Preamble, and Articles 8(j) and 10(c) and (d) of the 1992 *International Convention on Biological Diversity*. See also the *Canadian Biodiversity Strategy: Canada's Response to the Convention on Biological Diversity* (Minister of Supply and Services Canada, 1995), in particular pages 2, 3, 4 and 49.

- "...COSEWIC has steadily been involved in gathering and incorporating Aboriginal knowledge in its assessments...one of the key things that we wanted to do in this most recent assessment was to ensure that we did incorporate IQ to the best of our abilities at that time. There is a lot of IQ in the report...IQ in the polar bear report was fundamentally important in assisting COSEWIC to the conclusion that bears are probably more abundant today than they have been over the last 30 or 40 or 50 years...IQ was very important, in terms of the scale of assessment...the fact that COSEWIC could have assessed the polar bears as multiple units, as many small units...we could have assessed each one of those 13 units, or perhaps we could have assessed it as 4 or 5 units...the fact that the bears are moving back and forth led us to conclude, again based on IQ, that perhaps smaller units were not appropriate to recognize for this assessment." (COSEWIC Chair, NWMB Hearing Transcript (T), p.105-107, lines 10-11)
- "...we've tended to accept IQ as it is as truth...it is not given less weight. It's sort of part of all of the information that comes into the assessment." (COSEWIC Chair, T, p.117, lines 7-11)

Another essential source of assistance to the decision-makers is the direct testimony of Inuit – hunters, community members and *qaujimaniliit*. That testimony was provided during the three-day NWMB public hearing into this matter, and deserves the same attention and consideration as the IQ and science contained in the STATUS REPORT.

#### 4. EVIDENCE AND ARGUMENTS CONSIDERED

All of the written submissions received and considered at the hearing are publicly available for download from the Board's website ([www.nwmb.com](http://www.nwmb.com)). In addition, the NWMB has produced a full transcript of the oral submissions, questions and answers delivered during the three day hearing. That transcript is available from the Board upon request. A brief summary of key points made during the hearing process is also attached to this letter as Appendix A.

In making its decision, the NWMB carefully reviewed all of the evidence and arguments presented to it, including the following:

##### 4.1 Biological characteristics of polar bears

- "Generation length in polar bears has been poorly studied...This report will use 12 years as the generation time of polar bears." (STATUS REPORT, p.22)
- "...identified subpopulations cannot be considered Designatable Units as per COSEWIC guides...the presence of larger-scale regional subdivisions in the polar bear population do not warrant more than a single Designatable Unit in Canada. However, this does not mean that conservation threats to polar bears are identical across the range of the species." (STATUS REPORT, p.13)

- “The reproductive capability of polar bear varies among subpopulations. Age at first reproduction may be as early as 4 years, with most subpopulations having females producing litters at relatively high rates by age 6...most males do not enter the reproductive segment of the population until they are 8-10 years (Ramsey and Stirling 1988; Derocher and Stirling 1998; Saunders 2005)” (**STATUS REPORT**, p.20)
- “Pregnancy rates appear to vary markedly among subpopulations, with as few as 50% of adult females (>5 years) that are available to mate (i.e., having no cubs or cubs that are about to be weaned) producing cubs the following year (e.g. Kane Basin) to as many as 100% (Baffin Bay).” (**STATUS REPORT**, p.21)
- “...most notable aspect of polar bear physiology, in the context of assigning status to the species, relates to the ability of polar bears to fast for long periods of time when forced on land during the ice-free season, without access to seals (50-60% of bears in Canada). While on land little food is available, and bears must rely on stored energy reserves until the sea ice forms again in late autumn (Ramsay and Hobson 1991; Derocher et al. 1993; Atkinson and Ramsay 1995). (**STATUS REPORT**, p.25)
- “...offspring body mass is closely tied to the amount of body fat carried by females (Atkinson and Ramsay 1995), reproductive success likely depends on how heavy females are when they begin, or more importantly end, periods of fasting.” (**STATUS REPORT**, p.25)
- “Participants of recent ATK studies in Gjoa Haven, Cambridge Bay and Taloyoak (Atatahak and Banci 2001; Keith et al. 2005) communicated that polar bears readily adapt their movements to environmental conditions and availability of prey species, but can be sensitive to human activity...The curiosity of polar bears makes them particularly vulnerable to human-caused mortality in defence of life or property” (**STATUS REPORT**, p.27)
- “...the diet of polar bears can extend to several species of mammals and birds, Inuit meat caches; and vegetation including berries; however, polar bears are best characterized as an obligate predator of seals using sea ice as a hunting platform.” (**STATUS REPORT**, p.27)
- “...polar bears, they will go where they can find food...seen bears hunting walruses, and they’re so numerous. Polar bears are even taking fish, and they can hunt on the tides. Some of them even do hunting for clams...also eat seaweeds and whatever they can grab.” (**KWB**, T, p.384-385, lines 25-7)
- “Dispersal in polar bears is poorly understood largely because subadult bears have rarely been tracked using radio-collars...Dispersal events have, however, been recorded using genetic analysis (Crompton 2004; Saunders 2005). Results from bears in the Gulf of Boothia and M’Clintock Channel (Saunders 2005), and Western Hudson Bay, Southern Hudson Bay, Foxe Basin, and Davis Strait (Crompton 2004) suggest that dispersing bears can and do traverse identified subpopulation boundaries.” (**STATUS REPORT**, p.27)



- “Bearded seals, harp seals, spotted seals, hooded seals, walrus, beluga whales and narwhal also feature in the diet of polar bears (Stirling and Archibald 1977; Kiliaan and Stirling 1978; Fay 1982; Lowry et al. 1987; Calvert and Stirling 1990; Smith and Sjare 1990; Derocher et al. 2002); however, scientific knowledge and ATK suggest it is the young seal hunted at its subnival den that is most important to the majority of polar bears (Stirling and Archibald 1977; Smith 1980; McDonald et al. 1997).” (**STATUS REPORT**, p.14)
- “Polar bears, though dependant on ice, are adaptable animals, even when it comes to changes in ice coverage conditions.” (**DOE Minister’s** May 19/10 letter)
- “...the primary threat to bears in the future is related to their dependence on ice. I haven’t heard anyone say that bears do not require ice. Bears seem to require ice for certain times of year, for certain periods of time, and there is reason to believe in some areas...that declines in ice appear to be linked to declines in bear condition and perhaps their survival...also indicated that that influence is not evident elsewhere in the Arctic. It’s clear that any effect of climate change on bears are not the same everywhere... it’s true that animals can adapt. Many animals can adapt. We’ve seen that. Many animals can adapt to human changes in habitat, but many animals cannot. The Labrador duck was unable to adapt, the great auk was unable to adapt, and the passenger pigeon was not able to adapt. It really depends on the magnitude of those changes relative to the animal or plant’s ability to react appropriately to those changes” (**COSEWIC Chair**, T, p.291, lines 23-26, p.292, lines 2-9, p.294, lines 4-13)

#### 4.1.1 Polar bear populations and population numbers

- “...thinking special concern polar bear versus special concern of human life is totally a major concern to us because polar bears are dangerous...we have been greatly affected by the number of population growth of polar bears because they keep coming into our camp, and they’re dangerous, and that’s why we’re not sure why it should be a concern...don’t think polar bears are threatened or of special concern...there was hardly any polar bears when I was a young man...we keep hearing from other communities that you don’t have to go out to hunt the bear, they’re coming to you because of the population growth...Inuit are threatened and in danger because of polar bears” (**Qaujimanilik, Whale Cove**, T, p. 59-60, lines 15-18)
- “...COSEWIC feels that there are a lot of bears today relative to what there was previously, and the report says that, that there’s good reason to think that there are more bears today than there were 30, 40, 50 years ago.” (**COSEWIC Chair**, T, p.96-97, lines 24-97)
- Canada-wide, polar bear numbers have increased, and their populations are in almost all cases healthier than they were historically. (**DOE Minister’s** May 19/10 letter)
- “...only worry we as harvesters have is if the population has exploded and it’s the people who should be of special concern.” (**QWB**, T, p.226, lines 3-5)

- "...in the last 20 years they are getting very close to the communities...20, 25 years ago they started increasing." (**KRWB**, T, p.406-407, lines 21-5)
- "...in speaking with hunters and Elders...reductions in sea ice, changes in the composition of the ice were noted, and an increased issue of problem bears in some areas were also noted, more bears being seen around communities. In the Baffin Bay area, the reports were that bears are increasing in abundance, there are more bears today than there were previously, and that bears seemed to be eating a broader range of food items...in the northern Beaufort, the Elders reported a stable abundance over the last 30 years...M'Clintock Channel, hunters reported reductions in the abundance of bears in the south but increases in abundance in the northern part of the area..." (**COSEWIC Chair**, T, p.81-82, lines 14-24)
- "The polar bears in Kivalliq, we're not worried about the polar bears in Kivalliq, we're not concerned about them...know that they're increasing in numbers." (**KWB**, T, p.247, lines 7-11)
- "...the areas where we used to hunt polar bear, we don't go that far anymore because the polar bears are coming into the communities, and they're nearer to the communities than before. The traditional polar bear hunting areas are not used anymore." (**KWB**, T, p.247, lines 22-26)
- "...the polar bears, they're increasing in numbers...come into Cambridge Bay, and they never had any polar bears before. Now they come into the community..." (**KRWB**, T, p.274-275, lines 20-8)
- "Between Cambridge Bay and Kugluktuk towards Boothia Peninsula there's only this one population, and they keep going back and forth..." (**KRWB**, T, p.275, lines 9-11)
- "...we are concerned about them because they're increasing in numbers because they're being a threat to the Inuit." (**KRWB**, T, p.275, lines 18-20)
- "There's always been polar bears, and they're always been healthy...the population is very high and very healthy..." (**HTO Arviat**, T, p.276, lines 6-9)
- "...grew up in Igloolik, there were no polar bears...in 1949...moved to near Pond Inlet, there were still no polar bears up there at the time...after 1965, the polar bears started increasing, started coming around in that area...not like today at that time...noticed that all the species are moving anywhere...the polar bears are everywhere now where there is no ice...They're not just on the ice. And they're also land animals, and they can live on the water." (**Qaujimanilik, Pond Inlet**, T, p.300-301, lines 5-3)
- "...we didn't have any polar bears at that time, and I can say that there are lots now, and it is different now than before...they're harassing, and they're destroying stuff...cannot go anywhere by myself...have to worry about the polar bears all the time because there's lots of polar bears now." (**Qaujimanilik, Iqaluit**, T, p.305-307, lines 20-26)
- "Back in those days, as people have been saying, there were no bears or there were very few. Now bears are all over...bears harvest seal underwater. They can pull seals out of

the water...is that a picture for a species that is declining or should be listed as a special concern? I would be favor of this listing if the numbers of bears were declining in Nunavut.” (**Qaujimanilik, Pangnirtung**, T, p.201, lines 5-19)

- “The polar bears population has skyrocketed. Like in the past, Arviat and other communities, as well, the numbers were very low. You can say now Arviat has a lot of polar bears.” (**HTO Arviat**, T, p.370, lines 20-24)
- “...seals are also threatened by polar bears...we have fewer seals now than before...There used to be lots of seals, but now because polar bears are increasing, they’re killing off the seal pups...they just kill off the seals even when they’re not going to eat them.” (**Qaujimanilik, Pond Inlet**, T, p.242-243, lines 18-7)
- “...used to be few polar bears in this area, I grew where there were lots of ducks when there were no polar bears. All the ducks where they used to nest, they’re not there anymore...they just...break up the eggs...they kill off wildlife when they’re not going to eat it...” (**Qaujimanilik, Iqaluit**, T, p.266, lines 20-25, p.267, lines 4-8)

#### 4.2 Climate warming and polar bear habitat

- “Sea ice is generally thinner and its properties seem to be changing... Sea ice freezes up later and breaks up earlier... The depletion of sea ice affects the health and movements of polar bears...” (*What if the winter doesn’t come? Inuit Perspectives on Climate Change Adaptation Challenges in Nunavut, Summary Workshop Report* (2005), p.3)
- “...to our Elders and from us to everyone in this room that the climate is fluctuating. It’s getting warmer, and the condition of the sea is changing, and the climate warming, global warming...the sea ice is degrading or the conditions are changing.” (**HTO Arviat**, T, p. 371-372, lines 23-3)
- “The physical attributes of sea ice are the primary determinants of the quality of polar bear habitat...is closely associated with that of the ringed seal (Stirling and Ortisland 1995)...” (**STATUS REPORT**, p. 14)
- “Several sources highlighting ATK of polar bears report Inuit concerns about deterioration of sea ice conditions and their impact on polar bears (Atatahak and Banci 2001; Dowsley 2005; Keith et al. 2005; NTI 2005; Nirlungayuk 2008).” (**STATUS REPORT**, p.15)
- “Climate change is modifying the dynamics of sea ice formation and distribution in the Arctic, and it is expected that amounts of multi-year sea ice will be reduced and that ice will continue to trend toward a predominance of thinner, annual ice formations.” (**STATUS REPORT**, p.15)
- “...satellite data indicate a  $2.7 \pm 0.6\%$  per decade decline in annual mean arctic sea ice extent observed since 1978. The decline for summer extent is larger then for winter in the Arctic, with the summer minumum declining at a rate of  $7.4 \pm 2.4\%$  per decade since 1979.” (**STATUS REPORT**, p.15)



- "...increase of 5°C in annual temperature from now to the end of the 21<sup>st</sup> century...however, there is considerable across-model range of 2.8°C to 7.8°C." (**STATUS REPORT**, p.16)
- "Changes in extent of sea ice have varied and will continue to vary regionally in Canada, and it is anticipated that the monthly extents of sea ice will show the least rates of change within the Arctic Archipelago and the greatest rates of change in Hudson Bay, Foxe Basin, Baffin Bay, Davis Strait, and the Beaufort Sea...ACIA model-averaging indicates that by 2090 it is likely that almost all sea ice within Canada will only form as annual (winter) sea ice." (**STATUS REPORT**, p.18)
- "...remains uncertain as to how every subpopulation will respond to climate warming, it follows that there is a minimum period of at least annual sea ice (likely modified by factors such as prey availability) conducive to the presence of polar bears." (**STATUS REPORT**, p.29)
- "...reduced survival for most age and sex classes in Western Hudson Bay with observations that body size of females coming off the sea ice has declined in association with earlier break-up in spring (Stirling et al. 1999), decline in the polar bear subpopulation of Western Hudson Bay is best explained by reduced access to food. Similar conclusions have been reached for polar bears of Southern Hudson Bay (Regher et al. 2007b; Rode et al. 2007)" (**STATUS REPORT**, p.28)
- Inuit report a large increase in the Southern Hudson Bay polar bear sub-population in recent decades. Scientific studies suggest that the population has not experienced any decline since the 1980s, and may have increased. (**STATUS REPORT**, p.47)
- "The evidence for the threat of climate warming occurs in one subpopulation located in the southern part of the polar bear range in Nunavut. Western Hudson Bay is unique from other subpopulations and should not be applied to all other subpopulations of Nunavut. The imminent threat of climate warming and loss of sea ice habitat in all other subpopulations of polar bears in Nunavut has not been verified and is not considered a threat to polar bears by Inuit." (**NTI**, T, p.469, lines 3-13)
- "...one measure of habitat for polar bears...optimal polar bear habitat in Canada and Greenland...from 2001 to 2050, it's expected to decline by 13 percent..." (**COSEWIC Chair**, T, p.90, lines 19-22)
- "...10 polar bear experts, on average, predicted that bears in the Canadian archipelago would decline by 18 percent by 2050. But the range of opinions was much broader...one person thought that bears in the Canadian archipelago would go up by 30 percent...at least one person thought that they would decline by 50 percent...Beaufort Sea, the average...expert opinions predicted a 30 percent decline...range from a 50 percent increase to a 70 percent reduction...in Hudson Bay...consensus that they were going to decline...reflected by a 45 percent average." (**COSEWIC Chair**, T, p.93-94, lines 21-14)

“...quantitative data on what trends in habitat mean for the future distribution and abundance of polar bears are limited...” (**STATUS REPORT**, p.19)

- “...We know that bears do depend on sea ice for their life at different stages and at different times of the year, but it is somewhat difficult to predict precisely how a particular reduction in sea ice will affect bear abundances.” (**COSEWIC Chair**, T, p.99-100, lines 6-3)
- “...quantitative data on what trends in habitat mean for the future distribution and abundance of polar bears are limited...” (**STATUS REPORT**, p.19)
- “Derocher et al. (2004) provide a synopsis of possible scenarios of changes in food availability to polar bears in the context of climate change, including the potential for climate warming to benefit some subpopulations, at least over the shorter term.” (**STATUS REPORT**, p.29)

#### **4.3 Over-harvest**

- “...most important problems with over-hunting are for the subpopulations of Kane Basin and Baffin Bay, and Western Hudson Bay in the context of lowered natural survival rates and climate change.” (**STATUS REPORT**, p.30)
- “...information was used...to try to predict what’s likely to happen in the near future, based on the survival of polar bears and the amount of cubs being produced, in the last 10 or 15 years... the prediction was that...Kane Basin and Baffin Bay subpopulations would be expected to decline...these might very well change with reductions in harvests such that they might well be stable in the near future...” (**COSEWIC Chair**, T, p.83, lines 10-15 and 25, p.84, lines 1-5)
- “Polar bears in Kane Basin do not differ genetically from those in Baffin Bay...” (**STATUS REPORT**, p.38)
- With respect to the Kane Basin population, “...the best estimate of the Greenland kill is 10 bears/year during 1999-2003 (Born 2005; Born and Sonne, 2005). However, the actual numbers being taken by Greenland hunters is uncertain (Rosing-Asvid 2002; Born and Sonne 2005) and needs to be validated... Kane Basin, Baffin Bay...and Davis Strait...are treated as a single unit for management purposes by Greenland...” (**STATUS REPORT**, p.48-49).
- In recent years, the average annual harvest of Kane Basin polar bears by Canadian hunters has been less than 1. (**STATUS REPORT**, p.49)
- “The management system in Nunavut is robust and can quickly react to overharvesting concerns: Example, M’Clintock Channel, Western Hudson Bay and Baffin Bay.” (**NTI**, T, p.468, lines 2-6)

#### **4.4 Pollution and increased industrial activity**

- "...primary threat to polar bears from industrial development may come from the potential for environmental contamination, especially large-scale oil spills." (**STATUS REPORT**, p.34)
- "Although recent oil-spill simulations (Durner et al. 2001) suggest that relatively few bears in Canada (Southern Beaufort Sea) would encounter oil if a major spill occurred from existing operations, as climate change increases access to the polar basin we might anticipate increased risks to bears with development in the Canadian Arctic Archipelago..." (**STATUS REPORT**, p.34)
- "...significant levels of various contaminants (organochlorines and other persistent organic pollutants) have been documented in polar bear tissues or tissues of their prey...Effects of various compounds in the tissues of polar bears or the seals they feed on remains largely unknown." (**STATUS REPORT**, p.34)
- "...there were two mines that were within range of polar bears in Nunavut. Those two mines have now closed and have been reclaimed. Contaminants that are found in polar bears does not originate in Nunavut and is thought to originate from countries outside Canada. There is no evidence presented to show the effects that would be considered threats to polar bears becoming threatened or endangered due to development and contaminants." (**NTI**, T, p.468, lines 9-19)
- "...the ice breakers and the cruise ships, they're not the only ones...there's more ship traffic since that Mary River project started in that area...the rangers and the armed forces -- the ships will be there...When the ships are up there the summer, they're going to scare off the marine mammals...we know that the polar bears will also follow the wildlife that they eat." (**QWB**, T, p.239-240, lines 13-5)
- "...feel that ice breakers are increasing, and they're going to be affecting different kinds of species of wildlife...polar bears can be just in the water, not necessarily on the ice...we don't want our wildlife species...to be harassed by the shipping..." (**Qaujimanilik, Kugaaruk**, T, p.415, lines 3-10)
- "...due to climate warming, the Northwest Passage (recently renamed the Canadian Internal Waters by the Government of Canada) will remain open for increasing periods of time, making it attractive as a major shipping route...How they will respond to these cumulative effects is unknown." (**STATUS REPORT**, p.35)

#### **5. CONCLUSION**

In carrying out its deliberations, the NWMB carefully noted – and is in agreement with – the shared recognition by a number of the hearing parties of the following fundamental facts:

- (a) The effects of climate change are evident in Nunavut, particularly in southern areas. Sea ice conditions are deteriorating, with freeze-up occurring later and break-up occurring earlier than in the past. These changes affect polar bears, although the effects are not the same everywhere.



- (b) Using sea ice as a hunting platform, polar bears harvest their primary prey, ringed seals.
- (c) Polar bears can and do rely upon a number of other food sources, including walrus, beluga whales, narwhals, several different types of other seals, birds, vegetation, meat caches, etc.
- (d) Polar bears are an adaptable species.
- (e) While there are regional differences among polar bears, there is a single polar bear population. Polar bears can and do cross identified sub-population boundaries.
- (f) It is somewhat difficult to predict precisely how a particular reduction in sea ice will affect bear abundances.
- (g) There is the potential for climate change to benefit some sub-populations, at least over the short term.
- (h) The Northern Beaufort Sea, Southern Hudson Bay, Norwegian Bay and Lancaster Sound polar bear sub-populations have not undergone any reduction in their numbers in recent decades.
- (i) Viscount Melville Sound, M'Clintock Channel and Gulf of Boothia polar bear sub-populations are increasing.
- (j) Current harvest levels do not pose a threat to the Northern Beaufort Sea, Southern Hudson Bay, Norwegian Bay, Lancaster Sound, Viscount Melville Sound, M'Clintock Channel, Gulf of Boothia, Davis Strait and Foxe Basin sub-populations.
- (k) There are more polar bears today in Canada than there have been at any time in at least the last half-century.
- (l) Throughout Nunavut, bears are a significant and growing public safety concern, with unwanted bear-human encounters having increased – and continuing to increase – dramatically.
- (m) The only polar bears in Canada that could encounter oil if a major spill occurred from existing operations would be those in the Southern Beaufort Sea.
- (n) It is unknown what the current effects of pollution and industrial development are on polar bears, or what the effects would be from any increase in either of them.

In working towards its decision, the NWMB carefully considered the arguments put forward by COSEWIC and Environment Canada that the Board should approve the listing of polar bear as a species of special concern. The NWMB also conscientiously considered the evidence supporting that position, including the evidence that – for the foreseeable future - climate change will continue to warm the Arctic and to reduce multi-year sea ice, that this climate warming will persist in affecting the health and movements of polar bears, that there will continue to be negative, and even drastic, consequences for at least a portion of the polar bear population and its habitat, that over-harvesting of polar bear sub-populations is a threat both to those populations and to the overall population of polar bears, that pollution and industrial activity are likely to increase in the Arctic in the coming decades, and that such increases will probably have a negative effect on polar bears.

At the same time, and just as carefully and conscientiously, the NWMB considered the arguments and evidence of Inuit – who have lived alongside the Nunavut population of polar bears for more than a thousand years. They report a polar bear population explosion in Nunavut, the likes of which is unprecedented in living memory. For most sub-populations, they see no signs of negative climate change effects on the bears or their habitat – the sea ice platform

remains solid and fully effective for bears and seals, and the bears themselves are thriving and reproducing very well. The alarm Inuit are sounding has to do with public safety: the bears are so numerous and unwanted encounters with them so common, that the fear for the safety of human life and property is approaching a panic.

Inuit are adamant that a reduction in harvest levels is not only unwarranted, but would exacerbate the dangerous polar bear population increase and the resulting grave public safety concern that they live with on a daily basis. As to growing pollution and industrial activity, Inuit recognize these as concerns, but rightly point out that no one has demonstrated that they constitute threats that could lead to polar bear becoming a threatened or endangered species. The threat from industrial activity is particularly speculative, since such activity remains minimal in Nunavut. For instance, oil spills are identified as the primary industrial development threat to polar bears, yet there are currently no oil extraction operations in the Territory.

As reported at the outset of this letter, after thoroughly weighing all of the arguments and evidence, the NWMB has decided not to approve the listing of polar bear as a species of special concern. In making that decision, the Board accepted and agreed with much of what COSEWIC and Environment Canada presented during the hearing process. In the final analysis, however, the Board concluded that it is too speculative at this point in time to conclude that polar bears are presently a species of special concern. In the face of the current on-the-ground reality of an overall healthy, dynamic and growing polar bear population with access in most of its habitat to an effective sea ice platform and adequate prey, the Board can not conclude – based upon more drastic developments predicted to unfold over many decades – that polar bears currently meet the test for a listing of special concern under SARA.

That said, the NWMB shares an overall concern with Government, COSEWIC and Inuit about the effects of climate change on Nunavut wildlife and habitat. The Board supports necessary mitigation measures, as well as appropriate monitoring and research. The situation of many wildlife species and their habitats in Nunavut needs to be closely followed during the coming decades. If circumstances should warrant, the NWMB would welcome a future COSEWIC re-assessment of polar bear.

### **5.1 Reasons for the NWMB decision**

The specific reasons for the NWMB's decision are the following:

1. While the effects of climate change are currently evident in Nunavut and are affecting polar bears, there are more polar bears today in Canada than there have been at any time in at least the last half-century.
2. Throughout Nunavut, bears are a significant and growing public safety concern, with unwanted bear-human encounters having increased – and continuing to increase - dramatically.
3. Scientific predictions concerning climate change, polar bears and their habitat anticipate significant declines in polar bear numbers and optimal habitat, measured over many

decades. In the meantime, the range of scientific opinions regarding future declines is broad, and scientists acknowledge that it is somewhat difficult to predict precisely how a particular reduction in sea ice will affect bear abundances. In addition, there is the potential for climate change to benefit some sub-populations, at least over the short term.

4. The scientific expectation is that (i) a minimum period of at least annual sea ice is conducive to the presence of polar bears, and (ii) annual sea ice - as well as some multi-year sea ice - will continue to form within Canada at least as far into the future as the year 2090.
5. While the loss of sea ice habitat and the resulting longer fasting period for the Western Hudson Bay sub-population has resulted in well-documented problems for that sub-population, including declines in numbers, the circumstances of other sub-populations - including the neighboring Southern Hudson Bay sub-population - are dramatically different. By way of example, Inuit report a large increase in the Southern Hudson Bay sub-population in recent decades - and scientific studies indicate that the sub-population has not experienced any decline since the 1980s, and may have increased.
6. While the primary prey of polar bears is ringed seal harvested using sea ice as a hunting platform, polar bears can and do rely upon a number of other food sources, including walrus, beluga whales, narwhals, several different types of other seals, birds, vegetation, meat caches, etc.
7. Polar bears are an adaptable species. The effects of climate change on polar bears is not the same everywhere in the Arctic, and that variability will likely continue into the future. There is the potential for polar bears to successfully adapt to at least some aspects of climate change.
8. Past concerns about the threat of over-harvest to the Western Hudson Bay, Baffin Bay and Kane Basin polar bear sub-populations have been successfully addressed:
  - 8.1 In 2007, the NWMB reduced the total allowable harvest (TAH) for the Western Hudson Bay sub-population from 56 to 38 bears, and further reduced that number to 8 bears in 2008.
  - 8.2 In 2010, the NWMB decided upon a significant modification to the TAH of 105 bears for the Baffin Bay sub-population – a reduction by 10 bears per year over the four years from 2011-12 to 2014-15, resulting in an annual TAH of 65 bears as of July 1<sup>st</sup> 2014. Greenland also implemented its own quota of approximately 75 bears for the Baffin Bay sub-population in 2007.<sup>2</sup> More recently, in 2009, Canada and Greenland entered into a Memorandum of Understanding (MOU) to effectively and sustainably co-manage polar bears within the Kane Basin and Baffin Bay management units.

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<sup>2</sup> The Greenland quota is a total of 100 bears for three sub-populations – Baffin Bay, Kane Basin and Davis Strait. Approximately three-quarters of that amount is generally taken from Baffin Bay.



8.3 The Nunavut TAH for the Kane Basin sub-population is 5 bears annually. In the last five years (2005-06 to 2009-10), a total of one bear has been harvested from the sub-population (in 2009-10). The Greenland quota was 10 in 2007, 8 in 2008 and 6 in 2009. Also note the essential and successful establishment of the MOU mentioned directly above.

9. The only polar bears in Canada that could potentially encounter oil if a major spill occurred from existing operations would be those in the Southern Beaufort Sea. There are no existing oil extraction operations in Nunavut.

10. It is unknown what the current effects of pollution and industrial development are on polar bears, or what the effects would be from any future increase in either of them.

Taking all of the above reasons into account, the NWMB's considered view is that it is premature at this point in time to conclude that polar bear is a species at risk. Accordingly, the Board has decided not to approve the listing of polar bear as a species of special concern under SARA. The NWMB hereby forwards its decision to you, Mr. Minister, pursuant to NLCA S.5.3.17 and clause 3.14 of the *Memorandum of Understanding to Harmonize the Designation of Rare, Threatened and Endangered Species Under the Nunavut Land Claims Agreement and the Listing of Wildlife Species at Risk under the Species at Risk Act*.

Should you have any questions or concerns with respect to this decision or the reasons provided by the NWMB, please do not hesitate to contact the Board.

Yours sincerely,



Willie Nakoolak,  
Acting Chairperson of the  
Nunavut Wildlife Management Board

Attachment (1)



Recd  
Dec 23/10

Mr. Willie Nakoolak  
Acting Chairperson  
Nunavut Wildlife Management Board  
P.O. Box 1379  
Iqaluit, Nunavut  
X0A 0H0

Dear Mr. Nakoolak:

Thank you for your correspondence of November 1, addressed to my predecessor, in which you present the Nunavut Wildlife Management Board's initial decision on the proposed listing of the polar bear (*Ursus maritimus*) as a species of special concern under the *Species at Risk Act* (SARA). I note that the Board does not support adding the polar bear to Schedule 1 to the Act.

I have carefully considered the Board's reasons for its initial decision, along with the outcome of the consultations with communities across the Canadian Arctic, and the advice from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). I hold the view that the polar bear is a species of special concern. Therefore, I intend to recommend to the Governor in Council to accept the assessment and add the polar bear to Schedule 1 to the Act.

I believe that it is necessary to make this recommendation because of the uncertainty about the future of polar bears across their entire Canadian range. My reasons for rejecting the Board's initial and confidential decision are outlined below, numbered according to section 5.1 of your letter.

1. More bears now than in the previous 50 years

The Board observed that, although the effects of climate change are currently evident in Nunavut and are affecting polar bears, there are more polar bears in Canada today than at any time in at least the previous half-century. This interpretation is not reflected in the COSEWIC status assessment, which shows that at least 4 of 13 subpopulations (approximately 28 percent of Canada's polar bears) are at a high risk of declining by 30 percent or more over the next 3 generations. When considering a listing to SARA, I must rely on the information used by COSEWIC in making its assessment. COSEWIC used the best available information including traditional knowledge.

.../2



## 2. Public safety

I recognize that the Nunavut Wildlife Management Board and northern communities have concerns about the increase in human-bear conflict, and I share this concern. We are in agreement that the safety of Canadians is paramount for all of us. The proposed listing of the polar bear as special concern would not affect the steps that northern communities must take to protect themselves.

## 3. to 5. Uncertainty surrounding climate change predictions, and potential benefit for some subpopulations

Although you agree that climate change is occurring, you raise concerns over the uncertainty around how a reduction in sea ice will affect polar bear abundance. The relationships between habitat losses and population demographics remain largely unknown. However, a decreased availability of sea ice habitat, coupled with longer fasting periods, can reasonably be expected to negatively impact polar bear populations. It is important to note that a special concern listing status is used when a wildlife species may become a threatened or an endangered species because of a combination of biological characteristics and identified threats. Therefore, the current uncertainty surrounding the effects of climate change on polar bears would warrant such a listing at this time.

## 5. to 7. Loss of sea ice habitat, changing prey preference and polar bears' ability to adapt

When considering the current and future impacts of climate change, I understand that a critical concern is polar bears' access to, and the abundance of, ice-dependent seals, especially ringed seals. I have considered the suggestion that polar bears are using alternative food sources to compensate when seals are not available as a food source due to sea ice changes. Although this suggests that there may be potential for polar bears to adapt to some aspects of climate change, considerable doubt remains over whether this large, specialized carnivore will be able to adapt. It remains uncertain whether alternate food sources could effectively sustain polar bear body condition at current levels, including the ability of females to successfully produce and raise offspring.

## 8. Addressing past concerns of overharvest from Western Hudson Bay, Baffin Bay and Kane Basin

I note the Board's position that past concerns about the threat of overharvest of polar bears from the Western Hudson Bay, Baffin Bay and Kane Basin subpopulations have been addressed. Although I recognize that modifications to the hunting quota system have



successfully lowered the harvest for these three subpopulations of polar bears, my officials advise me, however, that there is no substantive new evidence to indicate that the declines reported in the COSEWIC status report for these subpopulations have been reversed. Given the continued uncertainty surrounding subpopulation sizes for Baffin Bay and Kane Basin polar bears, it has not yet been ascertained whether the current reductions in total allowable harvest will bring harvest down to a sustainable level. It is important to note that, were the polar bear listed as special concern in Schedule 1 to the Act, this would not invoke any requirements for harvest restrictions, quotas, tags or any other changes to harvesting practices. However, a SARA management plan, required for special concern species, could include improved monitoring to prevent future overharvests from Canadian subpopulations of the polar bear.

9. The low risk of a major oil spill

Although COSEWIC agreed that it appears that relatively few of Canada's polar bears would currently be at risk from an oil spill, the Committee also considered that expected risks will likely increase as environmental change results in longer shipping seasons and opens up previously unnavigable routes. Moreover, future oil and gas exploration and exploitation throughout the Arctic have been identified as a potentially significant threat to polar bears.

10. The unknown effects of pollution and future industrial development

You refer to the speculative nature of knowledge concerning the effects of pollution and industrial development on polar bears. This risk is not directly mentioned in COSEWIC's reasons for status designation, although it may be inferred indirectly in the concerns for the future status of this species in Canada, and can be considered of particular concern for a top predator. It is known that polar bears are exposed to a variety of environmental contaminants. Although effects are only partially understood at this time, changes to immune function and reproductive capabilities are expected.

Predicting future events necessarily includes a degree of uncertainty. However, as Minister of the Environment, I have a responsibility to ensure that reasonable measures of conservation are not postponed due a lack of certainty over threats of serious or irreparable damage to polar bear subpopulations in Canada.

COSEWIC must re-assess a species every ten years or at any time that the Committee has reason to believe that a species' status has changed significantly. Should new data become available within the ten-year cycle, a request can be

made to the Committee that the polar bear be re-assessed. If, in future assessments, COSEWIC finds that the status of the polar bear has changed, the species can be removed from Schedule 1 to SARA, or listed at a higher or lower risk level, as appropriate.

If the polar bear is listed as special concern, the requisite management plan will be prepared in consultation with the Nunavut Wildlife Management Board in accordance with the provisions of the Nunavut Land Claims Agreement. The plan would provide a framework within which federal and provincial/territorial governments, wildlife management boards, Inuit and scientists would collaborate to gather the necessary population information, and develop appropriate polar bear management and conservation strategies.

I look forward to continued collaboration and consultation with the Nunavut Wildlife Management Board in all shared wildlife interests. I also look forward to working together to ensure a future for Canada's polar bears.

Sincerely,

A handwritten signature in dark ink, appearing to read "John Baird". The signature is fluid and cursive, with the first name "John" and last name "Baird" clearly distinguishable.

John Baird, P.C., M.P.



Tammaqtailinahuaririit anngutighat atuqhugit Inuit qaujimajatuqangillu ilihmaniillu ilitquhiannin  
Conserving wildlife through the application of Inuit Qaujimajatuqangit and scientific knowledge

The Honourable Peter Kent  
Minister of the Environment  
Les Terrasses de la Chaudière  
10 Wellington Street, 28<sup>th</sup> Floor  
Gatineau, Quebec  
K1A 0H3

**Re: Reconsideration and final decision by the Nunavut Wildlife Management Board with respect to the proposed listing of polar bear as a species of special concern under the *Species at Risk Act***

On March 22<sup>nd</sup> 2011, the Nunavut Wildlife Management Board (NWMB or Board) met in Iqaluit to reconsider its November 1<sup>st</sup> 2010 written decision concerning the proposed listing of polar bear as a species of special concern under the *Species at Risk Act* (SARA), and to make a final decision with respect to the proposed listing. Pursuant to Section 5.3.21 of the *Nunavut Land Claims Agreement* (NLCA), the NWMB was required to conduct its reconsideration in light of your predecessor's December 23<sup>rd</sup> 2010 written reasons for rejecting the Board's initial decision. **Following a thorough reconsideration, the NWMB decided to maintain its original decision to not approve the listing of polar bear as a species of special concern.**

## 2. REASONS FOR THE MINISTER'S REJECTION, AND NWMB RESPONSES

1. The NWMB's interpretation that there are more bears now than in the previous 50 years is not reflected in the COSEWIC status assessment, which shows that



approximately 28% of Canada's polar bears (at least 4 of 13 populations) are at a high risk of declining by 30% or more over the next three generations.

*NWMB response:* In its initial decision, the Board concluded that there are more bears today in Canada than there have been at any time in the last half-century. That conclusion is shared by the Government of Nunavut, Nunavut Tunngavik Inc. (NTI), Nunavut's three Regional Wildlife Organizations – and by COSEWIC:

*“... COSEWIC feels that there are a lot of bears today relative to what there was previously, and the report says that, that there's good reason to think that there are more bears today than there were 30, 40 or 50 years ago... IQ in the polar bear report was fundamentally important in assisting COSEWIC to the conclusion that bears are probably more abundant today than they have been over the last 30 or 40 or 50 years... [Transcript, p.96-97, lines 24-3, and p.106, lines 7-11]”*

The NWMB agrees with the Minister that the COSEWIC status assessment indicates a high risk of decline for 4 of 13 sub-populations. At the same time, the COSEWIC Status Report (SR) states that *“...For most subpopulations with repeated censuses, data suggests a slight increase in the last 10-25 years. [SR, p.58]”* In addition, as NTI points out: *“In total, COSEWIC finds that the trend for 72% of Canada's polar bears is stable, increasing or unknown... [NTI submission dated February 25<sup>th</sup> 2011, p.1; RS p.v]”*

2. While the Minister shares the public safety concerns of the NWMB and Nunavut communities, and agrees that public safety is paramount, a listing of special concern would not affect the steps that need to be taken to ensure safety.

*NWMB response:* The NWMB agrees that a listing of special concern would not affect the steps that need to be taken to ensure safety. However, as explained by the Board in its initial decision letter, the public safety concern arises primarily from the distressing increase in polar bear numbers in Nunavut: *“...the NWMB considered the arguments and evidence of Inuit – who have lived alongside the Nunavut population of polar bears for more than a thousand years. They report a polar bear population explosion in Nunavut, the likes of which is unprecedented in living memory... The alarm Inuit are sounding has to do with public safety: the bears are so numerous and unwanted encounters with them so common, that the fear for the safety of human life and property is approaching a panic. [November 1<sup>st</sup> 2010 NWMB letter to the Minister, p. 11-12]”*

3. A decreased availability of sea ice habitat, coupled with longer fasting periods, can reasonably be expected to negatively impact polar bear populations. The current uncertainty surrounding the effects of climate change on polar bears warrants a listing of special concern, which would reflect that polar bears *“...may become a threatened or an endangered species because of a combination of biological characteristics and identified threats”*.



*NWMB response:* The Board agrees that decreased availability of sea ice habitat, coupled with longer fasting periods, can reasonably be expected to negatively impact polar bear populations – depending upon the amount and rate of the decrease in sea ice. Notwithstanding that expectation, there are more polar bears in existence today than at any time in the last half-century [COSEWIC Chair, Transcript, p.96-97, lines 24-3, and p.106, lines 7-11], the range of scientific opinions regarding future declines is broad [COSEWIC Chair, Transcript, p.93-94, lines 21-14], there is the potential for climate change to benefit some sub-populations at least over the short term [SR, p.29], and annual sea ice and some multi-year sea ice are expected to continue to form within Canada for at least the next 79 years [SR, p.18]. These and several other significant reasons support the conclusion that polar bear is not a species of special concern at this time.

4. A critical concern is polar bears' access to - and the abundance of - ice-dependent seals, especially ringed seals. It remains uncertain whether alternate food sources could effectively sustain polar bear body condition at current levels, including the ability of females to successfully produce and raise offspring.

*NWMB response:* The NWMB agrees that the primary prey of polar bears is ringed seals, that a reduction in the abundance of seals would be a concern, that the bears also rely upon a number of other food sources, and that significant reliance upon alternate food sources would raise the issue of whether the bears would be able to maintain body condition at current levels. However, as of February 8<sup>th</sup> 2011, the Department of Fisheries and Oceans (DFO) was of the view that ringed seals in the Arctic continue to be highly abundant, resilient and adaptable: "... *ringed seals are the most abundant and widespread marine mammal in the circumpolar Arctic, with a continuous distribution throughout the Canadian Arctic...*" [DFO letter to the U.S. National Marine Fisheries Service, p.2]. In addition, polar bears are themselves an adaptable species [SR, p.27], the effects of climate change on polar bears is not the same across the Arctic [COSEWIC Chair, Transcript p.291-292, lines 23-9], and that variability will likely continue well into the future [SR, p.18].

5. Although modifications to the quota system for Western Hudson Bay, Baffin Bay and Kane Basin have successfully lowered the harvest for the three polar bear subpopulations, there is no substantive new evidence to indicate that the COSEWIC-reported declines have been reversed. In addition, it has not yet been ascertained whether the current quota reductions will bring harvests down to a sustainable level. A SARA management plan could include improved monitoring to prevent future overharvests.

*NWMB response:* The NWMB agrees with all of the Minister's points, including that reductions in the quotas for the Western Hudson Bay, Baffin Bay and Kane Basin sub-populations have resulted in actual lower – indeed, significantly lower - harvest levels. The Board is confident that subsequent research will demonstrate the effectiveness of the responsible management steps which the NWMB, the Government of Nunavut and the Government of Greenland have taken. The

management system in Nunavut is robust – it can, and does, quickly and effectively react to overharvesting concerns [Nunavut Tunngavik Inc., Transcript, p.468, lines 2-6].

6. While relatively few Canadian polar bears would currently be at risk from an oil spill, COSEWIC considered that expected risks will likely increase as environmental change results in longer shipping seasons and opens up previously un-navigable routes. Moreover, future oil and gas exploration and exploitation have been identified as a potentially significant threat to polar bears.

*NWMB response:* The NWMB agrees with all of the Minister's points. At the same time, the Board maintains its assertion that the only polar bears in Canada that could potentially encounter oil if a major spill occurred from existing operations would be those in the Southern Beaufort Sea [SR, p.34]. There are no existing oil extraction operations in Nunavut.

7. The effects of pollution and industrial development can be considered of particular concern for top predators, such as polar bears. It is known that polar bears are exposed to a variety of environmental contaminants. Although effects are only partially understood at this time, changes to immune function and reproductive capabilities are expected.

*NWMB response:* The NWMB agrees with the Minister's first two points. Regarding the claim that "*changes to immune function and reproductive capabilities are expected*", the Board found no sound basis for those findings in the public hearing record. On the contrary, the COSEWIC Status Report made the following observations:

*"...Effects of various compounds in the tissues of polar bears or of the seals they feed on remains largely unknown. Although contaminant levels in some subpopulations correlate with impaired endocrine function (Skaare et al. 2001; Oskam et al. 2004), immune function (e.g., Bernhoft et al. 2000; Skaare et al. 2002; Lie et al. 2004, 2005), and potentially bone mineral composition (Sonne et al. 2004), there has been little demonstration of demographic effects from contaminants on polar bears (Amstrup2003). [SR, p.34-35]"*

### **3. REASONS FOR THE NWMB's FINAL DECISION**

The specific reasons for the NWMB's final decision are the following:

1. While the effects of climate change are currently evident in Nunavut and are affecting polar bears, it is widely recognized – including by COSEWIC – that there are more polar bears today in Canada than there have been at any time in at least the last half-century.



2. Primarily due to the increased numbers of polar bears in Nunavut, they are a significant and growing public safety concern, with unwanted bear-human encounters having increased – and continuing to increase - dramatically.
3. Scientific predictions concerning climate change, polar bears and their habitat anticipate significant declines in polar bear numbers and optimal habitat, measured over many decades. In the meantime, the range of scientific opinions regarding future declines is broad, and scientists acknowledge that it is somewhat difficult to predict precisely how a particular reduction in sea ice will affect bear abundances. In addition, there is the potential for climate change to benefit some sub-populations, at least over the short term.
4. The scientific expectation is that (i) a minimum period of at least annual sea ice is conducive to the presence of polar bears, and (ii) annual sea ice - as well as some multi-year sea ice - will continue to form within Canada at least as far into the future as the year 2090.
5. While the loss of sea ice habitat and the resulting longer fasting period for the Western Hudson Bay sub-population has resulted in well-documented problems for that sub-population, including declines in numbers, the circumstances of other sub-populations - including the neighboring Southern Hudson Bay sub-population - are dramatically different. By way of example, Inuit report a large increase in the Southern Hudson Bay sub-population in recent decades - and scientific studies indicate that the sub-population has not experienced any decline since the 1980s, and may have increased.
6. The primary prey of polar bears is ringed seal harvested using sea ice as a hunting platform. Ringed seals continue to be the most abundant and widespread marine mammal in the circumpolar Arctic, with a continuous distribution throughout the Canadian Arctic. In addition, polar bears can and do rely upon a number of other food sources, including walrus, beluga whales, narwhals, several different types of other seals, birds, vegetation, meat caches, etc.
7. Polar bears are an adaptable species. The effects of climate change on polar bears is not the same everywhere in the Arctic, and that variability will likely continue into the future. There is the potential for polar bears to successfully adapt to at least some aspects of climate change.
8. Past concerns about the threat of over-harvest to the Western Hudson Bay, Baffin Bay and Kane Basin polar bear sub-populations have been successfully addressed:
  - 8.1 In 2007, the NWMB reduced the total allowable harvest (TAH) for the Western Hudson Bay sub-population from 56 to 38 bears, and further reduced that number to 8 bears in 2008.

8.2 In 2010, the NWMB decided upon a significant modification to the TAH of 105 bears for the Baffin Bay sub-population – a reduction by 10 bears per year over the four years from 2011-12 to 2014-15, resulting in an annual TAH of 65 bears as of July 1<sup>st</sup> 2014. Greenland also implemented its own quota of approximately 75 bears for the Baffin Bay sub-population in 2007.<sup>1</sup> More recently, in 2009, Canada and Greenland entered into a Memorandum of Understanding (MOU) to effectively and sustainably co-manage polar bears within the Kane Basin and Baffin Bay management units.

8.3 The Nunavut TAH for the Kane Basin sub-population is 5 bears annually. In the last five years (2005-06 to 2009-10), a total of one bear has been harvested from the sub-population (in 2009-10). The Greenland quota was 10 in 2007, 8 in 2008 and 6 in 2009. Also note the essential and successful establishment of the MOU mentioned directly above.

These sub-populations will continue to be closely monitored in the coming years, and the NWMB is prepared to further modify TAHs and other harvesting limitations as circumstances require.

9. The only polar bears in Canada that could potentially encounter oil if a major spill occurred from existing operations would be those in the Southern Beaufort Sea. There are no existing oil extraction operations in Nunavut.
10. It is unknown what the current effects of pollution and industrial development are on polar bears, or what the effects would be from any future increase in either of them.

#### **4. CONCLUSION**

After thoroughly weighing all of the arguments and evidence, the NWMB has decided not to approve the listing of polar bear as a species of special concern. In arriving at that final decision, the Board carefully considered the Minister's reasons for rejection of its initial decision, and agreed with many of the points raised. Indeed, the Board accepted and agreed with much of what COSEWIC and Environment Canada presented during the hearing process. In the final analysis, however, the NWMB decided that it is too speculative at this point in time to conclude that polar bears are presently a species of special concern. In the face of the current on-the-ground reality of an overall healthy, dynamic and growing polar bear population with access in most of its habitat to an effective sea ice platform and adequate prey, the Board can not conclude – based upon more drastic developments predicted to unfold over many decades – that polar bears currently meet the test for a listing of special concern under SARA.

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<sup>1</sup> The Greenland quota is a total of 100 bears for three sub-populations – Baffin Bay, Kane Basin and Davis Strait. Approximately three-quarters of that amount is generally taken from Baffin Bay.

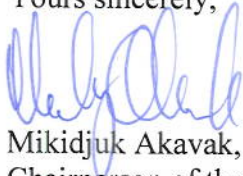


That said, the NWMB shares an overall concern with Government, COSEWIC and Inuit about the effects of climate change on Nunavut wildlife and habitat. The Board supports necessary mitigation measures, as well as appropriate monitoring and research. The situation of many wildlife species and their habitats in Nunavut needs to be closely followed during the coming decades. If circumstances should warrant, the NWMB would welcome a future COSEWIC re-assessment of polar bear.

The NWMB hereby forwards its final decision to you, Mr. Minister, pursuant to NLCA S.5.3.21 and clause 3.16 of the *Memorandum of Understanding to Harmonize the Designation of Rare, Threatened and Endangered Species Under the Nunavut Land Claims Agreement and the Listing of Wildlife Species at Risk under the Species at Risk Act*.

Should you have any questions or concerns with respect to this decision or the reasons provided by the NWMB, please do not hesitate to contact the Board.

Yours sincerely,



Mikidjuk Akavak,  
Chairperson of the  
Nunavut Wildlife Management Board

Attachments:

- (i) November 1<sup>st</sup> 2010 initial NWMB decision letter and Appendix, and
- (ii) December 23<sup>rd</sup> 2010 response letter from the Minister.



**Re: Decision of the Nunavut Wildlife Management Board concerning the proposed listing of polar bear as a species of special concern under the *Species at Risk Act***

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## **2. COSEWIC'S REASONS FOR ITS DESIGNATION OF SPECIAL CONCERN**

Pursuant to the terms of SARA, a listing of "*special concern*" is justified when a wildlife species "... may become a threatened or an endangered species because of a combination of biological characteristics and identified threats." By way of brief summary, the reasons for COSEWIC's designation of special concern are the following:

- With respect to biological characteristics, polar bears have evolved to take advantage of killing seals from a sea ice platform.
- The over-arching identified threat to polar bears is climate warming, which is predicted to continue to melt Arctic sea ice during the coming decades.
- Other identified threats are over-harvest, pollution and increased industrial activity in the Arctic.
- That combination of biological characteristics and identified threats will cause declines in polar bear numbers, leading to polar bears becoming threatened or endangered if the threats to them are not reversed or managed with demonstrable effectiveness.

## **3. THE IMPORTANCE OF INUIT QAUJIMAJATUQANGIT IN CONSIDERING THE PROPOSED LISTING OF POLAR BEAR AS A SPECIES OF SPECIAL CONCERN**

In considering and deciding upon the potential classification of polar bear as a species at risk, COSEWIC is required by SARA s.15(2) to do so on the basis of the best available scientific knowledge, community knowledge and aboriginal traditional knowledge (*Inuit Qaujimajatuqangit* or IQ). For its part, the NWMB is required to apply both IQ and scientific knowledge in carrying out its functions under the *Nunavut Land Claims Agreement* (NLCA – see, for instance, NLCA S.5.1.2(e), 5.1.3(a)(i) and (b)(i), (iii) and (v), 5.1.4 and 5.1.5). All of this is in keeping with specific Canadian national and international commitments to recognize the value of aboriginal traditional knowledge.<sup>1</sup>

It is therefore essential that COSEWIC, the NWMB, the Environment Canada Minister and the Governor in Council carefully consider, and assign appropriate weight to, the significant contributions from IQ and *qaujimaniliit* (persons recognized by their communities as possessing in-depth IQ) in the examination of whether polar bear should, at this time, be listed as a species of special concern.

The 2008 *COSEWIC Assessment and Update Status Report on the Polar Bear in Canada* (STATUS REPORT) is one very helpful source to assist the decision-makers in conducting their due diligence examination and in reaching their conclusions:

<sup>1</sup> See the Preamble, and Articles 8(j) and 10(c) and (d) of the 1992 *International Convention on Biological Diversity*. See also the *Canadian Biodiversity Strategy: Canada's Response to the Convention on Biological Diversity* (Minister of Supply and Services Canada, 1995), in particular pages 2, 3, 4 and 49.



- "...COSEWIC has steadily been involved in gathering and incorporating Aboriginal knowledge in its assessments...one of the key things that we wanted to do in this most recent assessment was to ensure that we did incorporate IQ to the best of our abilities at that time. There is a lot of IQ in the report...IQ in the polar bear report was fundamentally important in assisting COSEWIC to the conclusion that bears are probably more abundant today than they have been over the last 30 or 40 or 50 years...IQ was very important, in terms of the scale of assessment...the fact that COSEWIC could have assessed the polar bears as multiple units, as many small units...we could have assessed each one of those 13 units, or perhaps we could have assessed it as 4 or 5 units...the fact that the bears are moving back and forth led us to conclude, again based on IQ, that perhaps smaller units were not appropriate to recognize for this assessment." (COSEWIC Chair, NWMB Hearing Transcript (T), p.105-107, lines 10-11)
- "...we've tended to accept IQ as it is as truth...it is not given less weight. It's sort of part of all of the information that comes into the assessment." (COSEWIC Chair, T, p.117, lines 7-11)

Another essential source of assistance to the decision-makers is the direct testimony of Inuit – hunters, community members and *qaujimaniliit*. That testimony was provided during the three-day NWMB public hearing into this matter, and deserves the same attention and consideration as the IQ and science contained in the STATUS REPORT.

#### 4. EVIDENCE AND ARGUMENTS CONSIDERED

All of the written submissions received and considered at the hearing are publicly available for download from the Board's website ([www.nwmb.com](http://www.nwmb.com)). In addition, the NWMB has produced a full transcript of the oral submissions, questions and answers delivered during the three day hearing. That transcript is available from the Board upon request. A brief summary of key points made during the hearing process is also attached to this letter as Appendix A.

In making its decision, the NWMB carefully reviewed all of the evidence and arguments presented to it, including the following:

##### 4.1 Biological characteristics of polar bears

- "Generation length in polar bears has been poorly studied...This report will use 12 years as the generation time of polar bears." (STATUS REPORT, p.22)
- "...identified subpopulations cannot be considered Designatable Units as per COSEWIC guides...the presence of larger-scale regional subdivisions in the polar bear population do not warrant more than a single Designatable Unit in Canada. However, this does not mean that conservation threats to polar bears are identical across the range of the species." (STATUS REPORT, p.13)



- “The reproductive capability of polar bear varies among subpopulations. Age at first reproduction may be as early as 4 years, with most subpopulations having females producing litters at relatively high rates by age 6...most males do not enter the reproductive segment of the population until they are 8-10 years (Ramsey and Stirling 1988; Derocher and Stirling 1998; Saunders 2005)” (**STATUS REPORT**, p.20)
- “Pregnancy rates appear to vary markedly among subpopulations, with as few as 50% of adult females (>5 years) that are available to mate (i.e., having no cubs or cubs that are about to be weaned) producing cubs the following year (e.g. Kane Basin) to as many as 100% (Baffin Bay).” (**STATUS REPORT**, p.21)
- “...most notable aspect of polar bear physiology, in the context of assigning status to the species, relates to the ability of polar bears to fast for long periods of time when forced on land during the ice-free season, without access to seals (50-60% of bears in Canada). While on land little food is available, and bears must rely on stored energy reserves until the sea ice forms again in late autumn (Ramsay and Hobson 1991; Derocher et al. 1993; Atkinson and Ramsay 1995).” (**STATUS REPORT**, p.25)
- “...offspring body mass is closely tied to the amount of body fat carried by females (Atkinson and Ramsay 1995), reproductive success likely depends on how heavy females are when they begin, or more importantly end, periods of fasting.” (**STATUS REPORT**, p.25)
- “Participants of recent ATK studies in Gjoa Haven, Cambridge Bay and Taloyoak (Atatahak and Banci 2001; Keith et al. 2005) communicated that polar bears readily adapt their movements to environmental conditions and availability of prey species, but can be sensitive to human activity...The curiosity of polar bears makes them particularly vulnerable to human-caused mortality in defence of life or property” (**STATUS REPORT**, p.27)
- “...the diet of polar bears can extend to several species of mammals and birds, Inuit meat caches; and vegetation including berries; however, polar bears are best characterized as an obligate predator of seals using sea ice as a hunting platform.” (**STATUS REPORT**, p.27)
- “...polar bears, they will go where they can find food...seen bears hunting walruses, and they’re so numerous. Polar bears are even taking fish, and they can hunt on the tides. Some of them even do hunting for clams...also eat seaweeds and whatever they can grab.” (**KWB**, T, p.384-385, lines 25-7)
- “Dispersal in polar bears is poorly understood largely because subadult bears have rarely been tracked using radio-collars...Dispersal events have, however, been recorded using genetic analysis (Crompton 2004; Saunders 2005). Results from bears in the Gulf of Boothia and M’Clintock Channel (Saunders 2005), and Western Hudson Bay, Southern Hudson Bay, Foxe Basin, and Davis Strait (Crompton 2004) suggest that dispersing bears can and do traverse identified subpopulation boundaries.” (**STATUS REPORT**, p.27)

- “Bearded seals, harp seals, spotted seals, hooded seals, walrus, beluga whales and narwhal also feature in the diet of polar bears (Stirling and Archibald 1977; Kiliaan and Stirling 1978; Fay 1982; Lowry et al. 1987; Calvert and Stirling 1990; Smith and Sjare 1990; Derocher et al. 2002); however, scientific knowledge and ATK suggest it is the young seal hunted at its subnivalian den that is most important to the majority of polar bears (Stirling and Archibald 1977; Smith 1980; McDonald et al. 1997).” (**STATUS REPORT**, p.14)
- “Polar bears, though dependant on ice, are adaptable animals, even when it comes to changes in ice coverage conditions.” (**DOE Minister’s** May 19/10 letter)
- “...the primary threat to bears in the future is related to their dependence on ice. I haven’t heard anyone say that bears do not require ice. Bears seem to require ice for certain times of year, for certain periods of time, and there is reason to believe in some areas...that declines in ice appear to be linked to declines in bear condition and perhaps their survival...also indicated that that influence is not evident elsewhere in the Arctic. It’s clear that any effect of climate change on bears are not the same everywhere... it’s true that animals can adapt. Many animals can adapt. We’ve seen that. Many animals can adapt to human changes in habitat, but many animals cannot. The Labrador duck was unable to adapt, the great auk was unable to adapt, and the passenger pigeon was not able to adapt. It really depends on the magnitude of those changes relative to the animal or plant’s ability to react appropriately to those changes” (**COSEWIC Chair**, T, p.291, lines 23-26, p.292, lines 2-9, p.294, lines 4-13)

#### **4.1.1 Polar bear populations and population numbers**

- “...thinking special concern polar bear versus special concern of human life is totally a major concern to us because polar bears are dangerous...we have been greatly affected by the number of population growth of polar bears because they keep coming into our camp, and they’re dangerous, and that’s why we’re not sure why it should be a concern...don’t think polar bears are threatened or of special concern...there was hardly any polar bears when I was a young man...we keep hearing from other communities that you don’t have to go out to hunt the bear, they’re coming to you because of the population growth...Inuit are threatened and in danger because of polar bears” (**Qaujimanilik, Whale Cove**, T, p. 59-60, lines 15-18)
- “...COSEWIC feels that there are a lot of bears today relative to what there was previously, and the report says that, that there’s good reason to think that there are more bears today than there were 30, 40, 50 years ago.” (**COSEWIC Chair**, T, p.96-97, lines 24-97)
- Canada-wide, polar bear numbers have increased, and their populations are in almost all cases healthier than they were historically. (**DOE Minister’s** May 19/10 letter)
- “...only worry we as harvesters have is if the population has exploded and it’s the people who should be of special concern.” (**QWB**, T, p.226, lines 3-5)



- "...in the last 20 years they are getting very close to the communities...20, 25 years ago they started increasing." (**KRWB**, T, p.406-407, lines 21-5)
- "...in speaking with hunters and Elders...reductions in sea ice, changes in the composition of the ice were noted, and an increased issue of problem bears in some areas were also noted, more bears being seen around communities. In the Baffin Bay area, the reports were that bears are increasing in abundance, there are more bears today than there were previously, and that bears seemed to be eating a broader range of food items...in the northern Beaufort, the Elders reported a stable abundance over the last 30 years...M'Clintock Channel, hunters reported reductions in the abundance of bears in the south but increases in abundance in the northern part of the area..." (**COSEWIC Chair**, T, p.81-82, lines 14-24)
- "The polar bears in Kivalliq, we're not worried about the polar bears in Kivalliq, we're not concerned about them...know that they're increasing in numbers." (**KWB**, T, p.247, lines 7-11)
- "...the areas where we used to hunt polar bear, we don't go that far anymore because the polar bears are coming into the communities, and they're nearer to the communities than before. The traditional polar bear hunting areas are not used anymore." (**KWB**, T, p.247, lines 22-26)
- "...the polar bears, they're increasing in numbers...come into Cambridge Bay, and they never had any polar bears before. Now they come into the community..." (**KRWB**, T, p.274-275, lines 20-8)
- "Between Cambridge Bay and Kugluktuk towards Boothia Peninsula there's only this one population, and they keep going back and forth..." (**KRWB**, T, p.275, lines 9-11)
- "...we are concerned about them because they're increasing in numbers because they're being a threat to the Inuit." (**KRWB**, T, p.275, lines 18-20)
- "There's always been polar bears, and they're always been healthy...the population is very high and very healthy..." (**HTO Arviat**, T, p.276, lines 6-9)
- "...grew up in Igloolik, there were no polar bears...in 1949...moved to near Pond Inlet, there were still no polar bears up there at the time...after 1965, the polar bears started increasing, started coming around in that area...not like today at that time...noticed that all the species are moving anywhere...the polar bears are everywhere now where there is no ice...They're not just on the ice. And they're also land animals, and they can live on the water." (**Qaujimanilik, Pond Inlet**, T, p.300-301, lines 5-3)
- "...we didn't have any polar bears at that time, and I can say that there are lots now, and it is different now than before...they're harassing, and they're destroying stuff...cannot go anywhere by myself...have to worry about the polar bears all the time because there's lots of polar bears now." (**Qaujimanilik, Iqaluit**, T, p.305-307, lines 20-26)
- "Back in those days, as people have been saying, there were no bears or there were very few. Now bears are all over...bears harvest seal underwater. They can pull seals out of



the water...is that a picture for a species that is declining or should be listed as a special concern? I would be favor of this listing if the numbers of bears were declining in Nunavut.” (Qaujimanilik, Pangnirtung, T, p.201, lines 5-19)

- “The polar bears population has skyrocketed. Like in the past, Arviat and other communities, as well, the numbers were very low. You can say now Arviat has a lot of polar bears.” (HTO Arviat, T, p.370, lines 20-24)
- “...seals are also threatened by polar bears...we have fewer seals now than before...There used to be lots of seals, but now because polar bears are increasing, they’re killing off the seal pups...they just kill off the seals even when they’re not going to eat them.” (Qaujimanilik, Pond Inlet, T, p.242-243, lines 18-7)
- “...used to be few polar bears in this area, I grew where there were lots of ducks when there were no polar bears. All the ducks where they used to nest, they’re not there anymore...they just...break up the eggs...they kill off wildlife when they’re not going to eat it...” (Qaujimanilik, Iqaluit, T, p.266, lines 20-25, p.267, lines 4-8)

#### 4.2 Climate warming and polar bear habitat

- “Sea ice is generally thinner and its properties seem to be changing... Sea ice freezes up later and breaks up earlier... The depletion of sea ice affects the health and movements of polar bears...” (*What if the winter doesn’t come? Inuit Perspectives on Climate Change Adaptation Challenges in Nunavut, Summary Workshop Report* (2005), p.3)
- “...to our Elders and from us to everyone in this room that the climate is fluctuating. It’s getting warmer, and the condition of the sea is changing, and the climate warming, global warming...the sea ice is degrading or the conditions are changing.” (HTO Arviat, T, p. 371-372, lines 23-3)
- “The physical attributes of sea ice are the primary determinants of the quality of polar bear habitat...is closely associated with that of the ringed seal (Stirling and Ortisland 1995)...” (STATUS REPORT, p. 14)
- “Several sources highlighting ATK of polar bears report Inuit concerns about deterioration of sea ice conditions and their impact on polar bears (Atatahak and Banci 2001; Dowsley 2005; Keith et al. 2005; NTI 2005; Nirlungayuk 2008).” (STATUS REPORT, p.15)
- “Climate change is modifying the dynamics of sea ice formation and distribution in the Arctic, and it is expected that amounts of multi-year sea ice will be reduced and that ice will continue to trend toward a predominance of thinner, annual ice formations.” (STATUS REPORT, p.15)
- “...satellite data indicate a  $2.7 \pm 0.6\%$  per decade decline in annual mean arctic sea ice extent observed since 1978. The decline for summer extent is larger then for winter in the Arctic, with the summer mininum declining at a rate of  $7.4 \pm 2.4\%$  per decade since 1979.” (STATUS REPORT, p.15)

- "...increase of 5°C in annual temperature from now to the end of the 21<sup>st</sup> century...however, there is considerable across-model range of 2.8°C to 7.8°C." (**STATUS REPORT**, p.16)
- "Changes in extent of sea ice have varied and will continue to vary regionally in Canada, and it is anticipated that the monthly extents of sea ice will show the least rates of change within the Arctic Archipelago and the greatest rates of change in Hudson Bay, Foxe Basin, Baffin Bay, Davis Strait, and the Beaufort Sea...ACIA model-averaging indicates that by 2090 it is likely that almost all sea ice within Canada will only form as annual (winter) sea ice." (**STATUS REPORT**, p.18)
- "...remains uncertain as to how every subpopulation will respond to climate warming, it follows that there is a minimum period of at least annual sea ice (likely modified by factors such as prey availability) conducive to the presence of polar bears." (**STATUS REPORT**, p.29)
- "...reduced survival for most age and sex classes in Western Hudson Bay with observations that body size of females coming off the sea ice has declined in association with earlier break-up in spring (Stirling et al. 1999), decline in the polar bear subpopulation of Western Hudson Bay is best explained by reduced access to food. Similar conclusions have been reached for polar bears of Southern Hudson Bay (Regher et al. 2007b; Rode et al. 2007)" (**STATUS REPORT**, p.28)
- Inuit report a large increase in the Southern Hudson Bay polar bear sub-population in recent decades. Scientific studies suggest that the population has not experienced any decline since the 1980s, and may have increased. (**STATUS REPORT**, p.47)
- "The evidence for the threat of climate warming occurs in one subpopulation located in the southern part of the polar bear range in Nunavut. Western Hudson Bay is unique from other subpopulations and should not be applied to all other subpopulations of Nunavut. The imminent threat of climate warming and loss of sea ice habitat in all other subpopulations of polar bears in Nunavut has not been verified and is not considered a threat to polar bears by Inuit." (**NTI**, T, p.469, lines 3-13)
- "...one measure of habitat for polar bears...optimal polar bear habitat in Canada and Greenland...from 2001 to 2050, it's expected to decline by 13 percent..." (**COSEWIC Chair**, T, p.90, lines 19-22)
- "...10 polar bear experts, on average, predicted that bears in the Canadian archipelago would decline by 18 percent by 2050. But the range of opinions was much broader...one person thought that bears in the Canadian archipelago would go up by 30 percent...at least one person thought that they would decline by 50 percent...Beaufort Sea, the average...expert opinions predicted a 30 percent decline...range from a 50 percent increase to a 70 percent reduction...in Hudson Bay...consensus that they were going to decline...reflected by a 45 percent average." (**COSEWIC Chair**, T, p.93-94, lines 21-14)



- "...quantitative data on what trends in habitat mean for the future distribution and abundance of polar bears are limited..." (**STATUS REPORT**, p.19)
- "...We know that bears do depend on sea ice for their life at different stages and at different times of the year, but it is somewhat difficult to predict precisely how a particular reduction in sea ice will affect bear abundances." (**COSEWIC Chair**, T, p.99-100, lines 6-3)
- "...quantitative data on what trends in habitat mean for the future distribution and abundance of polar bears are limited..." (**STATUS REPORT**, p.19)
- "Derocher et al. (2004) provide a synopsis of possible scenarios of changes in food availability to polar bears in the context of climate change, including the potential for climate warming to benefit some subpopulations, at least over the shorter term." (**STATUS REPORT**, p.29)

#### 4.3 Over-harvest

- "...most important problems with over-hunting are for the subpopulations of Kane Basin and Baffin Bay, and Western Hudson Bay in the context of lowered natural survival rates and climate change." (**STATUS REPORT**, p.30)
- "...information was used...to try to predict what's likely to happen in the near future, based on the survival of polar bears and the amount of cubs being produced, in the last 10 or 15 years... the prediction was that...Kane Basin and Baffin Bay subpopulations would be expected to decline...these might very well change with reductions in harvests such that they might well be stable in the near future..." (**COSEWIC Chair**, T, p.83, lines 10-15 and 25, p.84, lines 1-5)
- "Polar bears in Kane Basin do not differ genetically from those in Baffin Bay..." (**STATUS REPORT**, p.38)
- With respect to the Kane Basin population, "...the best estimate of the Greenland kill is 10 bears/year during 1999-2003 (Born 2005; Born and Sonne, 2005). However, the actual numbers being taken by Greenland hunters is uncertain (Rosing-Asvid 2002; Born and Sonne 2005) and needs to be validated... Kane Basin, Baffin Bay...and Davis Strait...are treated as a single unit for management purposes by Greenland..." (**STATUS REPORT**, p.48-49).
- In recent years, the average annual harvest of Kane Basin polar bears by Canadian hunters has been less than 1. (**STATUS REPORT**, p.49)
- "The management system in Nunavut is robust and can quickly react to overharvesting concerns: Example, M'Clintock Channel, Western Hudson Bay and Baffin Bay." (**NTI**, T, p.468, lines 2-6)



#### 4.4 Pollution and increased industrial activity

- "...primary threat to polar bears from industrial development may come from the potential for environmental contamination, especially large-scale oil spills." (**STATUS REPORT**, p.34)
- "Although recent oil-spill simulations (Durner et al. 2001) suggest that relatively few bears in Canada (Southern Beaufort Sea) would encounter oil if a major spill occurred from existing operations, as climate change increases access to the polar basin we might anticipate increased risks to bears with development in the Canadian Arctic Archipelago..." (**STATUS REPORT**, p.34)
- "...significant levels of various contaminants (organochlorines and other persistent organic pollutants) have been documented in polar bear tissues or tissues of their prey...Effects of various compounds in the tissues of polar bears or the seals they feed on remains largely unknown." (**STATUS REPORT**, p.34)
- "...there were two mines that were within range of polar bears in Nunavut. Those two mines have now closed and have been reclaimed. Contaminants that are found in polar bears does not originate in Nunavut and is thought to originate from countries outside Canada. There is no evidence presented to show the effects that would be considered threats to polar bears becoming threatened or endangered due to development and contaminants." (**NTI**, T, p.468, lines 9-19)
- "...the ice breakers and the cruise ships, they're not the only ones...there's more ship traffic since that Mary River project started in that area...the rangers and the armed forces - - the ships will be there...When the ships are up there the summer, they're going to scare off the marine mammals...we know that the polar bears will also follow the wildlife that they eat." (**QWB**, T, p.239-240, lines 13-5)
- "...feel that ice breakers are increasing, and they're going to be affecting different kinds of species of wildlife...polar bears can be just in the water, not necessarily on the ice...we don't want our wildlife species...to be harassed by the shipping..." (**Qaujimanilik, Kugaaruk**, T, p.415, lines 3-10)
- "...due to climate warming, the Northwest Passage (recently renamed the Canadian Internal Waters by the Government of Canada) will remain open for increasing periods of time, making it attractive as a major shipping route...How they will respond to these cumulative effects is unknown." (**STATUS REPORT**, p.35)

#### 5. CONCLUSION

In carrying out its deliberations, the NWMB carefully noted – and is in agreement with – the shared recognition by a number of the hearing parties of the following fundamental facts:

- (a) The effects of climate change are evident in Nunavut, particularly in southern areas. Sea ice conditions are deteriorating, with freeze-up occurring later and break-up occurring earlier than in the past. These changes affect polar bears, although the effects are not the same everywhere.



- (b) Using sea ice as a hunting platform, polar bears harvest their primary prey, ringed seals.
- (c) Polar bears can and do rely upon a number of other food sources, including walrus, beluga whales, narwhals, several different types of other seals, birds, vegetation, meat caches, etc.
- (d) Polar bears are an adaptable species.
- (e) While there are regional differences among polar bears, there is a single polar bear population. Polar bears can and do cross identified sub-population boundaries.
- (f) It is somewhat difficult to predict precisely how a particular reduction in sea ice will affect bear abundances.
- (g) There is the potential for climate change to benefit some sub-populations, at least over the short term.
- (h) The Northern Beaufort Sea, Southern Hudson Bay, Norwegian Bay and Lancaster Sound polar bear sub-populations have not undergone any reduction in their numbers in recent decades.
- (i) Viscount Melville Sound, M'Clintock Channel and Gulf of Boothia polar bear sub-populations are increasing.
- (j) Current harvest levels do not pose a threat to the Northern Beaufort Sea, Southern Hudson Bay, Norwegian Bay, Lancaster Sound, Viscount Melville Sound, M'Clintock Channel, Gulf of Boothia, Davis Strait and Foxe Basin sub-populations.
- (k) There are more polar bears today in Canada than there have been at any time in at least the last half-century.
- (l) Throughout Nunavut, bears are a significant and growing public safety concern, with unwanted bear-human encounters having increased – and continuing to increase – dramatically.
- (m) The only polar bears in Canada that could encounter oil if a major spill occurred from existing operations would be those in the Southern Beaufort Sea.
- (n) It is unknown what the current effects of pollution and industrial development are on polar bears, or what the effects would be from any increase in either of them.

In working towards its decision, the NWMB carefully considered the arguments put forward by COSEWIC and Environment Canada that the Board should approve the listing of polar bear as a species of special concern. The NWMB also conscientiously considered the evidence supporting that position, including the evidence that – for the foreseeable future – climate change will continue to warm the Arctic and to reduce multi-year sea ice, that this climate warming will persist in affecting the health and movements of polar bears, that there will continue to be negative, and even drastic, consequences for at least a portion of the polar bear population and its habitat, that over-harvesting of polar bear sub-populations is a threat both to those populations and to the overall population of polar bears, that pollution and industrial activity are likely to increase in the Arctic in the coming decades, and that such increases will probably have a negative effect on polar bears.

At the same time, and just as carefully and conscientiously, the NWMB considered the arguments and evidence of Inuit – who have lived alongside the Nunavut population of polar bears for more than a thousand years. They report a polar bear population explosion in Nunavut, the likes of which is unprecedented in living memory. For most sub-populations, they see no signs of negative climate change effects on the bears or their habitat – the sea ice platform



remains solid and fully effective for bears and seals, and the bears themselves are thriving and reproducing very well. The alarm Inuit are sounding has to do with public safety: the bears are so numerous and unwanted encounters with them so common, that the fear for the safety of human life and property is approaching a panic.

Inuit are adamant that a reduction in harvest levels is not only unwarranted, but would exacerbate the dangerous polar bear population increase and the resulting grave public safety concern that they live with on a daily basis. As to growing pollution and industrial activity, Inuit recognize these as concerns, but rightly point out that no one has demonstrated that they constitute threats that could lead to polar bear becoming a threatened or endangered species. The threat from industrial activity is particularly speculative, since such activity remains minimal in Nunavut. For instance, oil spills are identified as the primary industrial development threat to polar bears, yet there are currently no oil extraction operations in the Territory.

As reported at the outset of this letter, after thoroughly weighing all of the arguments and evidence, the NWMB has decided not to approve the listing of polar bear as a species of special concern. In making that decision, the Board accepted and agreed with much of what COSEWIC and Environment Canada presented during the hearing process. In the final analysis, however, the Board concluded that it is too speculative at this point in time to conclude that polar bears are presently a species of special concern. In the face of the current on-the-ground reality of an overall healthy, dynamic and growing polar bear population with access in most of its habitat to an effective sea ice platform and adequate prey, the Board can not conclude – based upon more drastic developments predicted to unfold over many decades – that polar bears currently meet the test for a listing of special concern under SARA.

That said, the NWMB shares an overall concern with Government, COSEWIC and Inuit about the effects of climate change on Nunavut wildlife and habitat. The Board supports necessary mitigation measures, as well as appropriate monitoring and research. The situation of many wildlife species and their habitats in Nunavut needs to be closely followed during the coming decades. If circumstances should warrant, the NWMB would welcome a future COSEWIC re-assessment of polar bear.

### **5.1 Reasons for the NWMB decision**

The specific reasons for the NWMB's decision are the following:

1. While the effects of climate change are currently evident in Nunavut and are affecting polar bears, there are more polar bears today in Canada than there have been at any time in at least the last half-century.
2. Throughout Nunavut, bears are a significant and growing public safety concern, with unwanted bear-human encounters having increased – and continuing to increase – dramatically.
3. Scientific predictions concerning climate change, polar bears and their habitat anticipate significant declines in polar bear numbers and optimal habitat, measured over many



decades. In the meantime, the range of scientific opinions regarding future declines is broad, and scientists acknowledge that it is somewhat difficult to predict precisely how a particular reduction in sea ice will affect bear abundances. In addition, there is the potential for climate change to benefit some sub-populations, at least over the short term.

4. The scientific expectation is that (i) a minimum period of at least annual sea ice is conducive to the presence of polar bears, and (ii) annual sea ice - as well as some multi-year sea ice - will continue to form within Canada at least as far into the future as the year 2090.
5. While the loss of sea ice habitat and the resulting longer fasting period for the Western Hudson Bay sub-population has resulted in well-documented problems for that sub-population, including declines in numbers, the circumstances of other sub-populations - including the neighboring Southern Hudson Bay sub-population - are dramatically different. By way of example, Inuit report a large increase in the Southern Hudson Bay sub-population in recent decades - and scientific studies indicate that the sub-population has not experienced any decline since the 1980s, and may have increased.
6. While the primary prey of polar bears is ringed seal harvested using sea ice as a hunting platform, polar bears can and do rely upon a number of other food sources, including walrus, beluga whales, narwhals, several different types of other seals, birds, vegetation, meat caches, etc.
7. Polar bears are an adaptable species. The effects of climate change on polar bears is not the same everywhere in the Arctic, and that variability will likely continue into the future. There is the potential for polar bears to successfully adapt to at least some aspects of climate change.
8. Past concerns about the threat of over-harvest to the Western Hudson Bay, Baffin Bay and Kane Basin polar bear sub-populations have been successfully addressed:
  - 8.1 In 2007, the NWMB reduced the total allowable harvest (TAH) for the Western Hudson Bay sub-population from 56 to 38 bears, and further reduced that number to 8 bears in 2008.
  - 8.2 In 2010, the NWMB decided upon a significant modification to the TAH of 105 bears for the Baffin Bay sub-population - a reduction by 10 bears per year over the four years from 2011-12 to 2014-15, resulting in an annual TAH of 65 bears as of July 1<sup>st</sup> 2014. Greenland also implemented its own quota of approximately 75 bears for the Baffin Bay sub-population in 2007.<sup>2</sup> More recently, in 2009, Canada and Greenland entered into a Memorandum of Understanding (MOU) to effectively and sustainably co-manage polar bears within the Kane Basin and Baffin Bay management units.

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<sup>2</sup> The Greenland quota is a total of 100 bears for three sub-populations - Baffin Bay, Kane Basin and Davis Strait. Approximately three-quarters of that amount is generally taken from Baffin Bay.

8.3 The Nunavut TAH for the Kane Basin sub-population is 5 bears annually. In the last five years (2005-06 to 2009-10), a total of one bear has been harvested from the sub-population (in 2009-10). The Greenland quota was 10 in 2007, 8 in 2008 and 6 in 2009. Also note the essential and successful establishment of the MOU mentioned directly above.

9. The only polar bears in Canada that could potentially encounter oil if a major spill occurred from existing operations would be those in the Southern Beaufort Sea. There are no existing oil extraction operations in Nunavut.
10. It is unknown what the current effects of pollution and industrial development are on polar bears, or what the effects would be from any future increase in either of them.

Taking all of the above reasons into account, the NWMB's considered view is that it is premature at this point in time to conclude that polar bear is a species at risk. Accordingly, the Board has decided not to approve the listing of polar bear as a species of special concern under SARA. The NWMB hereby forwards its decision to you, Mr. Minister, pursuant to NLCA S.5.3.17 and clause 3.14 of the *Memorandum of Understanding to Harmonize the Designation of Rare, Threatened and Endangered Species Under the Nunavut Land Claims Agreement and the Listing of Wildlife Species at Risk under the Species at Risk Act*.

Should you have any questions or concerns with respect to this decision or the reasons provided by the NWMB, please do not hesitate to contact the Board.

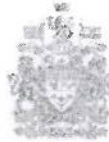
Yours sincerely,



Willie Nakoolak,  
Acting Chairperson of the  
Nunavut Wildlife Management Board

Attachment (1)



Recd  
Dec 23/10

Mr. Willie Nakoolak  
Acting Chairperson  
Nunavut Wildlife Management Board  
P.O. Box 1379  
Iqaluit, Nunavut  
X0A 0H0

Dear Mr. Nakoolak:

Thank you for your correspondence of November 1, addressed to my predecessor, in which you present the Nunavut Wildlife Management Board's initial decision on the proposed listing of the polar bear (*Ursus maritimus*) as a species of special concern under the *Species at Risk Act* (SARA). I note that the Board does not support adding the polar bear to Schedule 1 to the Act.

I have carefully considered the Board's reasons for its initial decision, along with the outcome of the consultations with communities across the Canadian Arctic, and the advice from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). I hold the view that the polar bear is a species of special concern. Therefore, I intend to recommend to the Governor in Council to accept the assessment and add the polar bear to Schedule 1 to the Act.

I believe that it is necessary to make this recommendation because of the uncertainty about the future of polar bears across their entire Canadian range. My reasons for rejecting the Board's initial and confidential decision are outlined below, numbered according to section 5.1 of your letter.

1. More bears now than in the previous 50 years

The Board observed that, although the effects of climate change are currently evident in Nunavut and are affecting polar bears, there are more polar bears in Canada today than at any time in at least the previous half-century. This interpretation is not reflected in the COSEWIC status assessment, which shows that at least 4 of 13 subpopulations (approximately 28 percent of Canada's polar bears) are at a high risk of declining by 30 percent or more over the next 3 generations. When considering a listing to SARA, I must rely on the information used by COSEWIC in making its assessment. COSEWIC used the best available information including traditional knowledge.



.../2



2. Public safety

I recognize that the Nunavut Wildlife Management Board and northern communities have concerns about the increase in human-bear conflict, and I share this concern. We are in agreement that the safety of Canadians is paramount for all of us. The proposed listing of the polar bear as special concern would not affect the steps that northern communities must take to protect themselves.

3. to 5. Uncertainty surrounding climate change predictions, and potential benefit for some subpopulations

Although you agree that climate change is occurring, you raise concerns over the uncertainty around how a reduction in sea ice will affect polar bear abundance. The relationships between habitat losses and population demographics remain largely unknown. However, a decreased availability of sea ice habitat, coupled with longer fasting periods, can reasonably be expected to negatively impact polar bear populations. It is important to note that a special concern listing status is used when a wildlife species may become a threatened or an endangered species because of a combination of biological characteristics and identified threats. Therefore, the current uncertainty surrounding the effects of climate change on polar bears would warrant such a listing at this time.

5. to 7. Loss of sea ice habitat, changing prey preference and polar bears' ability to adapt

When considering the current and future impacts of climate change, I understand that a critical concern is polar bears' access to, and the abundance of, ice-dependent seals, especially ringed seals. I have considered the suggestion that polar bears are using alternative food sources to compensate when seals are not available as a food source due to sea ice changes. Although this suggests that there may be potential for polar bears to adapt to some aspects of climate change, considerable doubt remains over whether this large, specialized carnivore will be able to adapt. It remains uncertain whether alternate food sources could effectively sustain polar bear body condition at current levels, including the ability of females to successfully produce and raise offspring.

8. Addressing past concerns of overharvest from Western Hudson Bay, Baffin Bay and Kane Basin

I note the Board's position that past concerns about the threat of overharvest of polar bears from the Western Hudson Bay, Baffin Bay and Kane Basin subpopulations have been addressed. Although I recognize that modifications to the hunting quota system have



successfully lowered the harvest for these three subpopulations of polar bears, my officials advise me, however, that there is no substantive new evidence to indicate that the declines reported in the COSEWIC status report for these subpopulations have been reversed. Given the continued uncertainty surrounding subpopulation sizes for Baffin Bay and Kane Basin polar bears, it has not yet been ascertained whether the current reductions in total allowable harvest will bring harvest down to a sustainable level. It is important to note that, were the polar bear listed as special concern in Schedule 1 to the Act, this would not invoke any requirements for harvest restrictions, quotas, tags or any other changes to harvesting practices. However, a SARA management plan, required for special concern species, could include improved monitoring to prevent future overharvests from Canadian subpopulations of the polar bear.

9. The low risk of a major oil spill

Although COSEWIC agreed that it appears that relatively few of Canada's polar bears would currently be at risk from an oil spill, the Committee also considered that expected risks will likely increase as environmental change results in longer shipping seasons and opens up previously unnavigable routes. Moreover, future oil and gas exploration and exploitation throughout the Arctic have been identified as a potentially significant threat to polar bears.

10. The unknown effects of pollution and future industrial development

You refer to the speculative nature of knowledge concerning the effects of pollution and industrial development on polar bears. This risk is not directly mentioned in COSEWIC's reasons for status designation, although it may be inferred indirectly in the concerns for the future status of this species in Canada, and can be considered of particular concern for a top predator. It is known that polar bears are exposed to a variety of environmental contaminants. Although effects are only partially understood at this time, changes to immune function and reproductive capabilities are expected.

Predicting future events necessarily includes a degree of uncertainty. However, as Minister of the Environment, I have a responsibility to ensure that reasonable measures of conservation are not postponed due a lack of certainty over threats of serious or irreparable damage to polar bear subpopulations in Canada.

COSEWIC must re-assess a species every ten years or at any time that the Committee has reason to believe that a species' status has changed significantly. Should new data become available within the ten-year cycle, a request can be

made to the Committee that the polar bear be re-assessed. If, in future assessments, COSEWIC finds that the status of the polar bear has changed, the species can be removed from Schedule 1 to SARA, or listed at a higher or lower risk level, as appropriate.

If the polar bear is listed as special concern, the requisite management plan will be prepared in consultation with the Nunavut Wildlife Management Board in accordance with the provisions of the Nunavut Land Claims Agreement. The plan would provide a framework within which federal and provincial/territorial governments, wildlife management boards, Inuit and scientists would collaborate to gather the necessary population information, and develop appropriate polar bear management and conservation strategies.

I look forward to continued collaboration and consultation with the Nunavut Wildlife Management Board in all shared wildlife interests. I also look forward to working together to ensure a future for Canada's polar bears.

Sincerely,

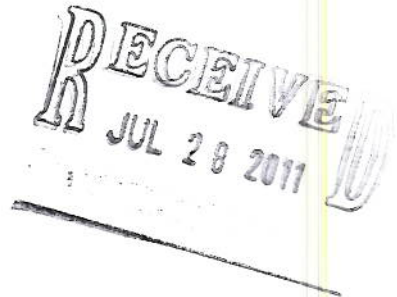
A handwritten signature in dark ink, appearing to read "John Baird". The signature is fluid and cursive, with the first name "John" and last name "Baird" clearly distinguishable.

John Baird, P.C., M.P.





JUN 21 2011



Mr. Mikidjuk Akavak  
Chairperson  
Nunavut Wildlife Management Board  
P.O. Box 1379  
Iqaluit NU X0A 0H0

Dear Mr. Akavak:

Thank you for your correspondence of April 29, informing me of the Nunavut Wildlife Management Board's final decision on the proposed listing of the polar bear (*Ursus maritimus*) as a species of special concern under the *Species at Risk Act*. I note that the Board maintains its initial decision to not approve the listing of polar bear in Schedule 1 to the Act.

This concludes the Nunavut Land Claims Agreement decision-making process for polar bears and enables me in turn to move forward with the development of my proposed recommendation to the Governor in Council. I expect this proposed recommendation to be published in Part I of the *Canada Gazette* this summer, allowing for a 30-day public comment period. I appreciate the Board's carefully considered reasons and will weigh its rationale prior to making my final recommendation. The publication of the Governor in Council's decision in Part II of the *Canada Gazette* is expected to take place this fall.

It is constructive to know that the Board is concerned about the effects of climate change on Nunavut wildlife and habitat, and that regardless of the outcome of my listing recommendation, Environment Canada can rely on the Board's support for necessary mitigation measures and appropriate monitoring and research.

Sincerely,

The Honourable Peter Kent, P.C., M.P.

