



2. DFO continue in its efforts to:
  - (a) re-examine - in light of new information - the historic, pre-commercial whaling population numbers for the Eastern Canada – West Greenland bowhead whale population; and
  - (b) seek a reconciliation of its current population estimates with those of the International Whaling Commission; and
3. In anticipation of potential future increases in the TAH, NTI continue to ensure that necessary equipment and training needs keep pace with the number of hunts undertaken in the NSA.

**Preliminary factors considered by the NWMB:**

In making its decision, the Board took into account the following preliminary factors:

1. At NWMB Special Meeting No. 11 (July 6-7, 2005), based upon recommendations from NTI, the Board approved several equipment modifications – for reasons of public safety - to the *Naujaat Aviq Hunt Plan* for the 2005 Repulse Bay bowhead hunt. Among those modifications was the following requirement: “*The new harpoon darting guns and Penthrite ‘Super Bomb’ Grenades be used exclusively as the primary method of harvest, and there be no use of a shoulder gun in the hunt*” (NWMB Resolution 2005-068). That safety requirement was also followed in the 2008 hunts.
2. At NWMB Regular Meeting No. 51 (April 24-26, 2007), NTI publicly presented and recommended *Bowhead Whale Hunt Plan Guidelines*, which included “*Primary killing equipment (harpooning equipment) that will deploy an exploding device...*”

**Evidence and arguments considered:**

In making its decision pursuant to NLCA Sections 5.3.3(a) and (c), the NWMB carefully reviewed all of the evidence and arguments presented to it, including the following:

**Size of the Eastern Canada – West Greenland bowhead whale population**

- (a) In 2007, DFO concluded that the Eastern Arctic bowhead whale population is most likely part of a single population known as the Eastern Canada – West Greenland bowhead whale population, shared by Nunavut, Nunavik and Greenland. (DFO, NWMB February 10<sup>th</sup> 2009 Bowhead Whale Hearing Transcript (Transcript), p.71, lines 16-24)
- (b) The estimate of the population of Eastern Canada – West Greenland bowhead whales is somewhere between a low of approximately 5,000 and an estimated high of 43,000 whales. (DFO, NWMB February 10<sup>th</sup> 2009 Bowhead Whale Hearing Binder (Binder), Tab 8, p.1 and Tab 9, p.2); NTI, Transcript, p.25, lines 4-8)

- (c) DFO's most recent fully corrected partial population estimate for the Eastern Canada – West Greenland bowhead whale population is 14,400 whales (CI 4,811 – 43,105). (DFO, Binder, Tab 8, p.1, and Tab 9, p.2; DFO, Transcript, p.73, lines 7-9)
- (d) NTI does not dispute the DFO population estimate of approximately 14,000 animals in the Eastern Canada – West Greenland bowhead whale population. (NTI, Transcript, p.65, lines 10-13)
- (e) DFO carried out surveys in 2002, 2003 and 2004. However, because bowheads are so mobile, *“...we got concerned about the fact if you start adding the numbers that you see in different years, you might be counting the same animals more than once. So in effect because of that we only used the areas that had yielded the highest numbers in one particular year, which was 2002.”* (DFO, Transcript, p.80-81, and p.82, lines 19-25)
- (f) Among the areas not covered in the 2002 survey are Repulse Bay, Coral Harbour, Cumberland Sound, Hudson Strait, Igloodik, Hall Beach, Isabella Bay (Igaliquuuq) and Kimmirut. (NTI, Transcript, p.130, lines 15-26, and p.131, lines 1-12)
- (g) DFO does not deny that a number of areas were not included in the survey, but it did estimate numbers in other regions, and those numbers are in the 1,000 to 2,000 range. (DFO, Transcript, p.132, lines 10-16)
- (h) *“...even though it's a partial coverage, the estimate of 2002 does cover the areas with the highest densities of bowheads and therefore is not that far off from the total number. But I could be wrong.”* (DFO, Transcript, p.133, lines 4-8)
- (i) DFO is of the view that its population estimate is not very precise – *“...you're pretty damn certain that there's 4,300 whales. The mean estimate, which is 14,4, you're about 50 percent confident that there's at least that number in nature out there. And then as you get to the lower end your confidence is tiny. 43,000 – you have virtually no confidence in that number, maybe 5 percent – 2.5 percent actually.”* (DFO, Transcript, p.83, lines 4-19, and p.85, lines 8-16)
- (j) *“There is continued discussion, both nationally and internationally, on the appropriate analytical method to estimate the abundance of the eastern Canada – west Greenland bowhead population. These discussions have produced a range of abundance estimates over the past three years.”* (DFO, Transcript, p.73, lines 1-7)
- (k) The DFO population estimate was presented to IWC scientists who disagreed with it, and were concerned about over-estimation *“- they took our data and revised it completely and came up with their own estimate, which gives a mean*

*estimate of 6,000 animals. And they used that to assign the quota to Greenland, and strike limit. So once we saw that we went ahead and looked at their concerns and are presently working on a reanalysis of that to see if there's some improvements that can be made that would make it more acceptable to the IWC Scientific Committee..."* (DFO, Transcript, p.107, lines 5-12, and 16-25)

- (l) The contribution made by Inuit to the conservation status of bowhead whales is the *Inuit Bowhead Knowledge Study* (IBKS), which was contradictory to the science at the time of its release [2000], but which has stood the test of time better than the scientific information. In fact, science has now caught up with the traditional knowledge (NTI, Transcript, p.36, lines 1-25; DFO, Transcript, p.78, lines 18-26, and p.79, line 1)
- (m) The NWMB should look at the strengths and weaknesses of both the IBKS and the scientific study, because there are pros and cons to each. (NTI, Transcript, p.42, lines 17-21)
- (n) *"Right now we observe many bowhead whales, and sometimes when you go out boating you get concerned because your boat might be toppled over by the bowhead whale. And since the last survey the bowhead whale population has increased drastically..."* (Pangnirtung Elder, Transcript, p.148, lines 10-15)

**Proposed Potential Biological Removal for the bowhead whale population**

- (o) *"Potential biological removal [PBR] is the maximum number of whales that can be removed by all human-induced mortality – for example, hunting, net entanglement, ship strikes – and still ensure continued recovery of the population."* (DFO, Transcript, p.74, lines 1-6)
- (p) Given the high level of uncertainty with the present estimates of both the current and the pre-commercial whaling population size, DFO recommends a potential PBR of 18 whales from this population. *"DFO research will continue towards refining the various factors used in estimating abundance."* (DFO, Transcript, p.74, lines 19-25. p.76, line 26, and p.77, lines 1-2)
- (q) NTI does not endorse the PBR that is set at 18 whales. This is an ultra-conservative number. If such a process were used for polar bears, the quota would be 24 bears. In fact, the polar bear TAH is approximately 500 bears (NTI, Transcript, p.26, lines 4-5, and p.27, lines 1-8)
- (r) *"...this [PBR] is not necessarily ultraconservative. I think it is precautionary... it's an accepted method...if you utilized the current COSEWIC status recommendation of threatened, then your recovery factor in the equation would be .3 and not .1"* (NTI Transcript, p.45, lines 4-6, and p.46, lines 10-13)

- (s) Currently, the total Inuit harvest from this population is five per year – 3 (planned) by Nunavut, 1 by Nunavik and 1 by Greenland. The PBR is more than three times the current harvest level. (NTI, Transcript, p.29, lines 9-17)
- (t) The population would presumably continue to recover even if the PBR was calculated at 90 whales, but that recovery would be much slower – probably 100 years (DFO, Transcript, p.111, lines 17-20)

**Level of recovery of the bowhead whale population**

- (u) The estimated historic population was 11,500 bowhead whales. “...it appears from the scientific information that you do not have a depleted population because the current DFO population estimate is 14,400 whales”. [NLCA S.5.1.5(d)] (NTI, Transcript, p.30, lines 21-26, and p.31, lines 1-2)
- (v) Although NTI has not consulted with enough Inuit to say whether bowheads have recovered to historic levels, at least some Inuit feel that they have recovered. In any case, the information before the NWMB is that the population has recovered, and Inuit are not disputing that. (NTI, Transcript, p.38, lines 17-24, and p.39, lines 17-19)
- (w) If one were to take a precautionary approach, and look more towards the lower end of the confidence interval (5,000 to 9,000 whales), then the population is in a recovery stage. (NWMB, Transcript, p.49, lines 23-26)
- (x) “...currently the calculation of the potential biological removal rate is one that accommodates a continuing recovery. So it’s basically irrelevant whether the population has recovered or it hasn’t recovered...” (NTI, Transcript, p.170, lines 2-6)
- (y) “Is the population recovered or not? Well, as you can see from the numbers, if you believe it’s at 14,4 and you believe the recovery target is as stated in the recovery potential assessment which is, by the way, an old document ...then you would say, yeah, the population is recovered. But in fact if you want to have a lot of certainty about the recovery you have to look up here in the lower confidence intervals. So at 4,000, the population is not recovered.” (DFO, Transcript, p.89, lines 22-26, and p.90, lines 1-8)
- (z) The pre-commercial population size estimate is currently being revised, as researchers have discovered new whaling logs indicating more whales were killed during the commercial period. “...this information has gone to the IWC for review, and it will probably generate some new estimate of pre-commercial population size.” (DFO, Transcript, p.101, lines 13-22)

**Public safety considerations with respect to bowhead hunts**

- (aa) About five years ago, a working group of experienced Inuit hunters and whaling captains began to work with a professional, having expertise in the

manufacturing of arms, to design “...a piece of equipment for deploying the new Penthrite grenades that were designed by the Alaska Whaling Commission. And we’ve purchased three sets of this equipment...” That’s one set for each of three hunts. (NTI, Transcript, p.55, lines 11-20, and p.57, line15)

- (bb) Training is provided to each whaling captain and crew in the safe handling and deployment of the new equipment, as well as with respect to the anatomy of bowhead whales. (NTI, Transcript, p.63, lines 5-12)

#### **Threats to the bowhead whale population**

- (cc) The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed bowhead whales as threatened in 2005. While COSEWIC is planning a reassessment in 2009, this bowhead population should – in the meantime - still be considered as threatened.(DFO, Transcript, p.71, lines 13-16, and p.73, lines 10-16)
- (dd) Changes in the Arctic environment will likely result in an increase in the use of large vessels used for commercial ventures such as tourism, fishing and mining operations. The potential for ship collisions could increase as ships more frequently traverse important bowhead areas. “...it’s well-documented that the nearest cousin to the bowhead, the right whale, has frequent accidents with large ships, especially ships like the ones used by mining companies...” (DFO, Transcript, p.74, lines 23-26, and p.75, lines 1-4, and p.94, lines1-4)
- (ee) The experience with right whales becoming entangled in seal or beluga nets and dying suggests the same possibility for bowheads. (DFO, Transcript, p.99, lines 24-26, and p.100, lines 1-7)

#### **Level of total allowable harvest for the bowhead whale population**

- (ff) Based upon a PBR of 18 and the proposal (by Nunavut, Nunavik and Greenland) to take only 5 whales, “...it would appear that we do have a vital, healthy population that can sustain the current harvest.” [NLCA S.5.1.5(c)] (NTI, Transcript, p.30, lines 6-12)
- (gg) “Based on this information [the abundance of bowhead whales and current Inuit harvesting levels] and the objectives of the NLCA, NTI on behalf of Inuit of Nunavut respectfully submits that there is no valid conservation purpose, public health or public safety reason to have a TAH on bowhead whales in the NSA...” (NTI, Binder, Tab 3, p.2)
- (hh) “Until there is more certainty in the current and historic population estimates, DFO is of the view that NWMB should continue to set a short-term total allowable harvest for bowhead whales in the Nunavut Settlement Area.” (DFO, Transcript, p.75, lines 5-9)

- (ii) *“NTI and the Wildlife Policy Advisory Committee, which is the chairs and co-chairs of the three RWOs, have indicated that for the next five years the needs level for Inuit in Nunavut is three whales a year, and plans and preparations are being made to organize and equip three hunts a year. WPAC also supports the continuation of a community hunt plan as a requirement prior to the hunts being done. Inuit are also committed to continuing to use best equipment available to do the hunts, and in the last four hunts we've been using new equipment that is more efficient and more effective.”* (NTI, Transcript, p.27, line 19-26, and p.28, lines 1-6)
- (jj) *“...there currently is no quantitative limit on bowhead whales anywhere in Canada outside the NSA.”* (NTI, Transcript, p.52, lines 25-25, and p.53, line1)
- (kk) *“...We do know what would happen when there is no TAH because that's what happens in Nunavik. Nunavik does not have a TAH. Their hunt is not out of control, it's not unregulated, it's not unorganized. It's a hunt very similar to the ones that we do here in Nunavut...”* (NTI, Transcript, p.171, lines 5-10)
- (ll) *“...the quantitative limit for Nunavik Inuit... is one. The quantitative limit for Greenland Inuit ... is one per year... with everyone, I think, being allowed to have two strikes. When you're actually looking at potential removal you have to double whatever everybody is taking to be on the cautious side of things.”* (NWMB, Transcript, p.54, lines 11-20; see also DFO, Binder, Tab 8, p.2)
- (mm) *“...all the harvests in Nunavut have never had a lost animal. All the animals that have been struck have been landed.”* (NTI, Transcript, p.56, lines 5-7)
- (nn) If there is no TAH, there is still a requirement to obtain a licence to hunt a bowhead whale. In addition, *“...5.7.6 of the Land Claims Agreement gives the RWOs the authority to self-regulate the harvesting of their HTOs, which would mean that the RWOs are still requiring the use of the equipment that we're using, that they're requiring a hunt plan that comes from the community, the proper preparation, the proper equipment and the proper training before these hunts are done...”* (NTI, Transcript, p.154, lines 21-26, and p.155, lines 1-7)
- (oo) *“Once we remove the TAH it's going to be a free-for-all for each of the communities. Have you considered whether it's going to improve the system if you remove the total allowable harvest...If you want to be considering removal, I would like you to seriously consider the consequences...”* (Qikiqtaaluk Wildlife Board (QWB), Transcript, p.138, lines 16-26)
- (pp) A community-based management system for bowhead whales could be used, similar to the one currently in place for other whales. *“...Because as I stated before, that the quota system actually causes overhunts, and perhaps you can put a quota on just to make sure, keep them down before we actually come up*

*with the community-based management for bowhead whale hunt.”* (QWB, Transcript, p.161, lines 14-21)

- (qq) If Inuit harvest too many bowhead whales, the meat and the blubber would be wasted. The whole whale should be utilized. (Pangnirtung and Repulse Bay Elders, Transcript, p.162, lines 7-13, and p.164, lines 11-17)

**Agreements with other jurisdictions concerning the bowhead whale population**

- (rr) One of the stumbling blocks in this process is that there is no representation in the hearing process by Greenland and Nunavik. (QWB, Transcript, p.69, lines 3-9)
- (ss) DFO has not initiated any discussions with Greenland in terms of sharing arrangements for this bowhead population. (DFO, Transcript, p.128, lines 9-15)
- (tt) DFO recommends that the NWMB and its Nunavik counterpart [the NMRWB] engage in discussions to decide upon a bowhead sharing arrangement between the two jurisdictions/land claim areas. (DFO, Transcript, p.117, lines 22-26, and p.118, lines 1-9)
- (uu) NTI and Makivik have been working very closely for approximately two years concerning bowhead harvesting, but NTI does not see the necessity for a formalized agreement since there appear to be more bowheads available than both Inuit groups are prepared to harvest. (NTI, Transcript, p.64, lines 11-13 and 19-23)

**International concerns with respect to Canada’s management of the bowhead whale population**

- (vv) A significant increase in or removal of the TAH may attract unwanted international attention, and may even provoke other nations to impose sanctions on Canada – especially considering the current COSEWIC designation of threatened. (DFO, Transcript, p.75, lines 16-26, and p.75, lines 1-3)
- (ww) Negative international perceptions and potential international criticism are not permissible grounds under the NLCA for either the NWMB or the Minister to justify limitations on harvesting bowhead whales. (NTI, Transcript, p.31, lines 9-16)
- (xx) To remove the TAH would give the impression that Canada would increase its take of bowhead whales – *“Canada would appear to be setting a precedent for allocation before any sharing arrangement had been developed between Canada and Greenland.”* (DFO, Transcript, p.76, lines 7-15)



**Conclusions:**

In carrying out its deliberations, the NWMB carefully considered the written and oral arguments and evidence put forward by NTI that the Board should entirely remove the TAH for bowhead at this time – including that:

- DFO's population estimate for the Eastern Canada – West Greenland bowhead whale population is 14,400 whales;
- The IBKS supports the position that the population has significantly increased in recent decades;
- The DFO-endorsed PBR of 18 is more than three times higher than the proposed annual take of 5 whales by Nunavut, Nunavik and Greenland;
- Because the PBR accommodates a continuing recovery, it is irrelevant whether the population has recovered or not;
- The PBR could arguably be calculated at a considerably higher level than 18;
- Inuit are committed to responsibly and safely carrying out each hunt;
- There is no quantitative limit on bowhead whales in Nunavik;
- Even without a TAH, there would still be a legal requirement to obtain a licence for each bowhead hunt; and
- International concerns and criticisms are not permissible grounds under the NLCA to justify limitations on harvesting bowhead whales.

At the same time, and just as carefully and conscientiously, the Board fully considered the arguments and evidence presented by DFO and the other parties who participated in the hearing process.

In reaching its decision, the NWMB found the following arguments and evidence to be particularly reliable and persuasive:

- Bowhead whales hunted in Nunavut waters belong to a single population known as the Eastern Canada – West Greenland bowhead whale population, shared by Nunavut, Nunavik and Greenland;
- The population estimate for the Eastern Canada – West Greenland bowhead whale population is not precise – between 4,811 and 43,105 whales – with higher confidence at the lower end of the confidence interval;
- The estimate of the International Whaling Commission Scientific Committee is 6,000 animals;
- DFO is currently working on a re-analysis of its data, to see if improvements can be made;
- Both the IBKS and scientific surveys are in agreement that the Eastern Canada – West Greenland bowhead whale population has increased dramatically from the low levels that persisted for a considerable length of time following the commercial whaling era;
- The estimated pre-commercial population of 11,500 whales is being seriously re-examined, following the discovery of new whaling logs indicating more whales were killed during the commercial period – and a new estimate is likely to be generated;

- Given the high level of uncertainty with the present estimates of both the current and the pre-commercial whaling population size, it is not advisable at this time to conclude that the Eastern Canada – West Greenland bowhead whale population has recovered;
- For the next five years, the needs level for Nunavut Inuit is three bowhead whales a year;
- In terms of potential removal through hunting, up to four strikes per year are permitted for Nunavik (two strikes, one landing) and Greenland (two strikes, one landing), and up to six strikes are permitted for 2009 (Greenland – four strikes, two landings – due to no hunt in 2008);
- In combination with Nunavut's proposed three hunts (six strikes, three landings), the total potential removal from the population through hunting – while very unlikely - would be up to ten whales per year (twelve in 2009);
- Ship collisions and gear entanglement are potential threats to bowhead whales, that may result in occasional accidental deaths;
- Inuit are committed to responsibly and safely carrying out each hunt, and have in place three sets of the equipment necessary to deploy the new Penthrite grenades – one set for each of three hunts;
- There are quantitative limits on bowhead whale hunting in both Nunavik and Greenland;
- International concerns and criticisms are not permissible grounds under the NLCA to justify limitations on Inuit harvesting of bowhead whales; and
- No sharing arrangements have yet been developed between Nunavut and Nunavik, or between Canada and Greenland, concerning the Eastern Canada – West Greenland bowhead whale population.

Based upon its careful consideration of all the arguments and evidence received, the NWMB has concluded that a precautionary approach is required in the circumstances. Because the Eastern Canada – West Greenland bowhead whale population has increased so dramatically, the Board is confident that its precautionary approach can reasonably accommodate a Nunavut harvest that entirely satisfies the needs level for Nunavut Inuit, as formally identified by NTI, and the Chairs and Co-chairs of the three Regional Wildlife Organizations.

A limitation of three whales – with the TAH of three permitting up to two strikes per harvest attempt (six strikes in total) – will restrict Inuit harvesting only to the extent necessary to effect the valid conservation purpose of continuing the successful restoration and revitalization of the Eastern Canada – West Greenland bowhead whale population. In addition, such a limitation ensures that the number of hunts coincides with the number of sets of equipment necessary to deploy the new Penthrite grenades – thus limiting Inuit harvesting only to the extent necessary to provide for public safety.

**NWMB request for a prompt response from the Minister**

Minister Shea, the NWMB hereby forwards its decision to you pursuant to NLCA S.5.3.17. While acknowledging that you have up to sixty days to provide a response (NLCA S.5.3.18), the Board requests that you treat this particular decision as an urgent

matter requiring a prompt reply. If there is to be up to three bowhead hunts this summer, Nunavut's Regional Wildlife Organizations and relevant Hunters and Trappers Organizations require as much time as possible to properly prepare for those hunts – including with respect to such matters as the selection of the hunt locations, the whaling crews, the provision of training, the assembly of appropriate whaling equipment, and the development (and subsequent NWMB approval) of comprehensive Whale Hunt Plans. Those Plans will need to address all of those matters just mentioned, as well as the towing, landing, processing, disposition and distribution of the harvested whales. Should your response not arrive soon - even if it is an acceptance of the NWMB decision – one or more of the proposed 2009 hunts will be put in jeopardy.

Please do not hesitate to contact the NWMB at any time, if you have questions or concerns with respect to the Board's decision and recommendations – or if the NWMB can be of other assistance in helping you to provide a swift response to its decision.

Yours sincerely,



Harry Flaherty, A/Chairperson of the  
Nunavut Wildlife Management Board

c.c. Eric Kan, Area Director, Eastern Arctic Area Office, Fisheries and Oceans Canada