

HEALTHY POLAR BEARS Less Than Healthy Science

Susan Crockford

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About the author

Dr Susan Crockford is an evolutionary biologist and an expert on polar bear evolution. She has been working for 35 years in archaeozoology, paleozoology and forensic zoology and is an adjunct professor at the University of Victoria, British Columbia, Canada. She works full time for a private consulting company she co-owns (Pacific Identifications Inc.) and is the author of *Rhythms of Life: Thyroid Hormone and the Origin of Species*. She blogs about polar bears past and present at www.polarbearscience.com.

1 Introduction

On 11 June 2014 I gave a lecture at the House of Lords in London arranged by the Global Warming Policy Foundation ('Healthy polar bears, less than healthy science'), in which I summarized recent concerns over polar bear populations. The perceptive questions afterwards and thought-provoking discussions that followed have prompted me to reflect on a few issues that garnered attention.

2 Reflections

On what do you base your assertion that polar bear populations are 'healthy'?

Virtually all of the research reports on polar bears over the last few years have contained good news.¹ Not only that but the results have contradicted the assertions of the biologists at the Polar Bear Specialist Group (PBSG)² that declining September seaice coverage and slightly longer open-water seasons are already causing harm to polar bears. Many people attending my lecture had not heard of these contradictions, some of which are listed below; the locations of the subpopulations mentioned can be seen in Figure 1:

- Davis Strait subpopulation numbers have increased substantially,³ despite declines in body condition and summer sea ice coverage.⁴
- Western Hudson Bay subpopulation numbers declined somewhat between 1998 and 2004⁵ but appear to have stabilized, while claims to the contrary⁶ have not been substantiated with published data.⁷
- Southern Hudson Bay subpopulation numbers have been stable over the last 30 years, despite declines in body condition and similar sea-ice declines as in Western Hudson Bay.⁸
- In their 2013 status update, the PBSG admitted that a study that registered a 'decline' of Southern Beaufort Sea bears, and which had been used as a critical piece of evidence in getting polar bears listed as 'threatened' in the United States, may have been invalid because it did not take into account known movements of bears in that region.⁹

¹http://urbantimes.co/2014/07/are-polar-bears-really-an-endangered-species/.

²The PBSG is one of the specialist groups of the International Union for the Conservation of Nature.

³http://polarbearscience.com/2013/06/10/signs-that-davis-strait-polar-bears-are-at-carrying-capacity/

⁴http://polarbearscience.com/2013/06/12/davis-strait-polar-bears-again-body-condition-declined-while-population-increased/

⁵http://polarbearscience.com/2012/12/16/species-threatening-population-declines-vs-polar-bear-declines/

⁶http://www.theguardian.com/environment/interactive/2013/nov/27/canada-dwindling-polar-bear-population-interactive

⁷http://polarbearscience.com/2013/11/28/polar-bear-researchers-still-withholding-hudson-bay-data/

⁸http://polarbearscience.com/2013/07/25/southern-hudson-bay-subpopulation-status-farthest-south-of-all-polar-bears/

⁹http://polarbearscience.com/2014/03/24/southern-beaufort-polar-bear-decline-reduced-cub-survival-touted-in-2008-was-invalid-pbsg-now-admits/

- A recent study found Chukchi Sea bears to be in good body condition and reproducing well,¹⁰ despite considerable declines in summer sea-ice coverage, including the near-record level low extent registered in 2007.¹¹
- Chukchi Sea ringed seals, the primary prey of polar bears and which are also listed as 'threatened with extinction' in the United States, are also in excellent condition and reproducing well, despite considerable declines in summer sea-ice coverage.¹²

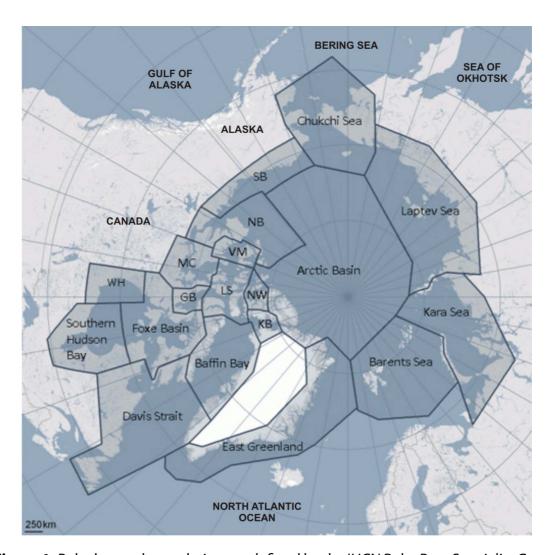


Figure 1: Polar bear subpopulations as defined by the IUCN Polar Bear Specialist Group (courtesy IUCN PBSG)

¹⁰ http://polarbearscience.com/2013/09/08/how-and-why-great-news-about-chukchi-polar-bears-has-been-suppressed/

¹¹http://polarbearscience.com/2013/09/15/record-sea-ice-loss-in-2007-had-no-effect-on-polar-bears-chukchi-study-confirms/

¹²http://polarbearscience.com/2013/07/11/chukchibering-sea-ringed-seals-doing-better-despite-declines-in-ice-and-snow-new-study/

Are the media or polar bear scientists to blame for hyping the 'polar bears are dying' meme?

It's easy to blame reporters for fanning the flames of hysteria – some of their copy on polar bears is truly over the top. Many news articles lack the application of common sense or even a modicum of fact checking. In a lot of cases, however, what's happening is that science writers simply take everything that polar bear biologists and their coauthors say as gospel¹³ and reprint press releases word for word.¹⁴

Press releases composed by institutional PR writers are almost always full of overzeal-ous statements of polar bear doom, in part because the papers or research being promoted stress a dire future. However, researchers themselves provide additional copy and quotes that push this message. Reporters are always looking for stories, of course, but time and again, we have seen instances of polar bear biologists providing outrageous statements, like the one made last year by Andrew Derocher and Steven Amstrup, the latter now chief scientist for Polar Bears International and formerly a biologist for the United States Geological Survey (my emphasis).

'All indications are that this population could collapse in the space of a year or two if conditions got bad enough,' said Andrew Derocher, a polar bear scientist at the University of Alberta. 'In 2020, I think it is still an open bet that we are going to have polar bears in western Hudson Bay.' 16

'... Amstrup said greenhouse gases created by humans threaten future generations of bears by threatening their ice. He said he likes to compare climate change's effect on polar bears to the infamous Titanic ocean liner. '[It] didn't matter how many people were on the Titanic or how well they were doing,' he said. 'When the Titanic slipped beneath the waves and they lost their habitat, that was it. So polar bears will also go away because of their dependence on sea ice.'¹⁷

This pattern of behaviour rather contradicts the recent essay by firefighter/author Zac Unger, ¹⁸ who said that 'scientists would prefer to be left in peace to do their work' but that 'polar bear researchers don't have that luxury'. Unger got a lot of press in North America in late 2012 and early 2013 during the promotion of his first book, *Never Look a Polar Bear in the Eye*, ¹⁹ which was quite critical of polar bear researchers and especially their penchant for exaggeration. The fact that he had been a firefighter made him a trustworthy figure with the media and his criticisms were not only accepted as valid but particularly shocking. Consequently, the apologist tone of this 2014 essay, defending PBSG biologists over the global population estimate fiasco and suggesting they were being forced into the public eye against their will, was quite a turn-around.

¹³ http://polarbearscience.com/2013/08/03/biologists-spreading-misinformation-hybridization-with-grizzlies-not-due-to-polar-bears-moving-inland/

¹⁴http://polarbearscience.com/2014/01/26/churchill-polar-bears-eat-more-caribou-and-geese-now-than-in-1968-because-there-are-more-caribou-and-geese-new-research-reveals/

¹⁵http://www.theguardian.com/environment/2013/aug/06/starved-polar-bear-record-sea-ice-melt

¹⁶http://www.theguardian.com/environment/2013/nov/27/polar-bears-climate-change-canada-hudson-bay

¹⁷http://www.nbcnews.com/news/other/climate-change-threatening-polar-bears-canada-f2D11591339

¹⁸ Polarizing Bears: How environmentalists and skeptics misrepresent the science on polar bears'. The Breakthrough Institute. http://thebreakthrough.org/index.php/programs/conservation-and-development/polarizing-bears

¹⁹Da Capo Press, 2013

My impression is that polar bear biologists routinely put themselves in the limelight because they want the attention, not because someone is forcing them to do so. Media attention can be an important career-booster. Job security is a huge issue for virtually all polar bear researchers, a point I made in an essay published last year:²⁰

"...given the precarious nature of funding for their chosen careers – which they themselves acknowledge – is it really possible to disconnect the concern polar bear researchers profess for the long-term survival of polar bears and their private worries over future employment?"

How significant was the recent dismissal of a petition to force Canada into listing polar bears as 'threatened with extinction'?

Two years ago, a petition attempting to force Canada to upgrade the status of polar bears to 'threatened with extinction' was filed with the Commission on Environmental Cooperation, an arm of the North American Free Trade Agreement (NAFTA²¹), for 'failing to effectively enforce its Species At Risk Act (SARA) with respect to the [current] listing of the polar bear as a species of special concern.'

The suit was filed by the Center for Biological Diversity (CBD), an activist environmental group that has kept United States government officials busy for years with appeals to get various species and so-called 'distinct populations' listed as 'threatened with extinction' under the Endangered Species Act. As conservation issues are dealt with differently in Canada, the CBD were attempting to use NAFTA to pressure Canada to upgrade polar bears to 'threatened,' from their current status as 'special concern.' This tactic was not the result of Canadian polar bears being obviously in trouble but a means to force Canada to enact legislation to combat the supposed perils of anthropogenic climate change predicted by computer models, something that the CBD proudly admitted.²²

The bid did not succeed,²³ in large part because Canada had provided adequate support for its lower-threat status assessment of 'special concern.' The NAFTA committee noted in particular²⁴ its acceptance of Canada's position that the work of Amstrup *et al.*,²⁵ which presented the computer-projected changes to polar bear habitat and which had been used to support a change in polar bear status by the US Fish and Wildlife Service, should be considered preliminary. This is because the model used by Amstrup and colleagues utilized the input of only a single polar bear expert, namely Steven Amstrup, when multiple expert opinions were required by the model's assumptions.

The NAFTA decision highlights the fact that there are legitimate scientific objections to the computer model outputs used to project a conservation threat for polar bears by

²⁰http://polarbearscience.com/2013/11/25/polar-bear-researchers-are-they-protecting-the-bears-or-their-own-jobs/

²¹The NAFTA signatories are Canada, the United States and Mexico.

²²http://www.cbc.ca/news/canada/manitoba/nafta-panel-won-t-review-canada-s-polar-bear-policy-1.2667925

²³http://polarbearscience.com/2014/06/07/activists-pressure-tactics-to-force-canada-to-list-polar-bears-as-threatened-have-failed/

²⁴http://www.cec.org/Page.asp?PageID=924&ContentID=25783

²⁵http://www.usgs.gov/newsroom/special/polar bears/

2050. It is also a reminder that polar bears are not actually threatened with extinction in Canada (or the United States) at present, according to criteria established by the International Union for Conservation of Nature and Natural Resources. Without future threats, the IUCN would be obliged to categorize the polar bear as a species of 'least concern' because its population is large and not restricted in distribution.²⁶

What do the recent actions of the PBSG say about their commitment to good science?

Let me start with a bit of background. PBSG was formed in 1968, under the Survival Service Commission branch of the International Union for Conservation of Nature and Natural Resources (IUCN). The stated purpose of the PBSG was to 'expedite the collection of data on the polar bear's natural history as a basis for future management'. Moreover, 'it was decided that more effective results would be achieved by inviting only a limited number of scientists actively involved in polar bear research to participate in a closed working session, as distinct from an open conference'. ²⁸

The PBSG originally comprised two scientists from each member nation (Canada, the United States, Soviet Russia, Denmark (for Greenland), and Norway), and it was decided that 'top on the list of research priorities [would be] the urgent need for more precise knowledge about the size of the world's polar bear population, the regional distribution, and the dynamics of reproduction'²⁹.

Remember this point because it will be important to later developments: generating a global population estimate for polar bears was an explicitly-stated, high-priority objective for the PBSG from its very inception.

There is one more relevant historical detail: by the eighth meeting in 1981, members were discussing the importance of consensus agreements. All members of the group were encouraged to come to an agreement on issues.³⁰ I suggest this indicates the PBSG was uncomfortable with dissenting opinions even then and had moved toward generating consensus statements as outputs of their meetings.

Fast forward to early 2009. Although the PBSG had grown somewhat in size, it was still a relatively small group of biologists (maximum 20) with extensive experience in polar bear research. But in that year, the PBSG revoked the membership of Mitch Taylor, an active voting member for 20 years, because they said his views on global warming ('climate warming' in their lexicon) 'were not helpful'.³¹

Taylor was not invited back as a member because of public statements he made between PBSG meetings, not for anything he'd said to the group directly. This strongly suggests that the PBSG did not want to have on record, in the proceedings of the upcoming 2009 meeting, a detailed account of objections to the use of climate models as predictors of future polar bear status, or to have to admit they could not reach a con-

²⁶http://polarbearscience.com/2012/12/26/did-the-pbsg-game-the-polar-bear-listing-process/

²⁷PBSG 1970 Report: Foreword. http://pbsg.npolar.no/en/meetings/index2.html

²⁸PBSG 1968 Report: p. 54. http://pbsg.npolar.no/en/meetings/stories/01st_meeting.html

²⁹PBSG 1968 Report: p. 56. http://pbsg.npolar.no/en/meetings/index2.html

³⁰PBSG 1981 report: pp. 8, 23, 27. http://pbsg.npolar.no/en/meetings/index2.html

³¹ http://joannenova.com.au/2009/09/exile-for-non-believers/

sensus on that issue. Rather than re-evaluate the science, they got rid of the dissenting voice.

I see the act of revoking member status for Taylor – followed shortly after by the PBSG inviting four known activists from conservation NGOs to their next meeting – as a signal to the world that the group was ready to be seen as an activist association first and a scientific organization second. Some may argue they had been acting in that capacity for years, but nevertheless this was a pivotal moment for the PBSG.

The final, definitive change came in 2012, when voting members of the group got together outside the usual meeting schedule to change the charter of the PBSG.³² At that meeting, they voted to change the rules requiring members to be 'active' biologists, increased the maximum number of members from 20 to 35, and apparently, removed the requirement that voting members have extensive field experience as polar bear researchers.³³

These changes allowed several important things to happen:

- lan Stirling, although retired from his government job, could stay a voting member.
- Elizabeth Peacock, formerly an active polar bear researcher but now a medical student, could stay on as a voting member.
- Several relatively inexperienced polar bear researchers (such as Todd Atwood, Markus Dyck, Evan Richardson, James Wilder) and one non-polar bear specialist with only a masters degree (Fernando Ugarte) were embraced as full voting members.
- Two members of activist NGOs (Geoff York of the World Wildlife Fund for Nature and Steven Amstrup, who, like Ian Stirling, is retired from his government job but employed fulltime by Polar Bears International) were added as full voting members.³⁴

It appears to me that the IUCN Polar Bear Specialist Group can no longer be considered the scientific advisory body it was originally intended to be. As of 2012, it became a *de facto* activist organization whose primary goal appears to be to ensure that polar bears remain 'threatened with extinction' due to global warming – because otherwise, there is little rationale for the group's continued existence.

Without anthropogenic global warming as a future threat, polar bears would very likely be downgraded to the equivalent status of 'least concern' throughout the Arctic, since they have clearly recovered from the ravages of overhunting that prompted the 1973 international treaty to protect them. Both the recent NAFTA decision, discussed on p. 6, and the refusal by CITES in 2013 to upgrade the conservation status of polar bears,³⁵ support this conclusion.

³²http://pbsg.npolar.no/en/meetings/stories/16th_meeting.html

³³http://pbsg.npolar.no/en/news/archive/2012/PBSG-Oslo-2012.html

³⁴http://pbsg.npolar.no/en/members/index.html

³⁵http://polarbearscience.com/2013/03/07/us-proposal-to-ban-polar-bear-trade-fails/

Is your blog helping to 'self-correct' the science on polar bears?

That question is a bit hard to judge but I believe the answer is 'yes'. I've tried to present a fuller spectrum of information than has been available online to date, including maps and other relevant background data, in an attempt to help scientist- and non-scientist alike make up their own minds about the various polar bear issues.

For example, a journalist or a polar bear biologist might glibly say, as they often do, that 'polar bears need sea ice and the ice is melting'. But when you know that only late summer ice has declined dramatically and that spring and early summer ice is what polar bears really need for survival – a point that is backed up by peer-reviewed research and sea ice maps that you can download and examine yourself – you won't be fooled by such half-truths.

Most days, more than half of the readers of my blog arrive via a search engine, which suggests there are a lot of people looking for information about polar bears. Those readers could be fellow scientists as well as non-scientists, including politicians and government administrators. That suggests to me that my goal to provide a useful information resource has been effective.

Three recent events suggest to me that my blog has helped raise awareness about the many half-truths that are being told about polar bears and their sea ice habitat:

- I got a significant spike of readers to my blog from Thailand during the 2013 CITES meeting in Bangkok, which I blogged about beforehand.³⁶ Ultimately, CITES members rejected for a second time the petition submitted by the US Fish and Wildlife Service calling for the imposition of severe trade restrictions on polar bears and polar bear products (like skins and claws)..³⁷
- 2. The 2013 PBSG status report,³⁸ with its good news and admissions of faulty and missing data, was published by PBSG officials on their website without fanfare of any kind. One might almost call it 'surreptitious': in 2009 a press release was issued.³⁹ Without my blog posts about the report,⁴⁰ few people would have been be aware of this update. See Figure 2.
- 3. The chairman of the PBSG sent me an unsolicited email announcing a crucial caveat to their global population estimates. This was to be included as a footnote in an upcoming report, rather than announced via a press release or publishing a statement on their own website.⁴¹ To me, this seems to represent recognition by the PBSG, or at least by their chairman, that I have people's attention. This key change is as follows (my emphasis):

As part of past status reports, the PBSG has traditionally estimated a range

³⁶http://polarbearscience.com/2013/02/04/why-is-the-us-pushing-to-ban-polar-bear-trade-polar-bears-have-been-saved/

³⁷ http://polarbearscience.com/2013/03/07/us-proposal-to-ban-polar-bear-trade-fails/

³⁸ http://polarbearscience.com/2014/02/14/polar-bear-population-now-officially-13071-24238-says-iucn-polar-bear-specialist-group/

³⁹http://pbsg.npolar.no/en/meetings/press-releases/15-Copenhagen.html

⁴⁰See http://polarbearscience.com/2014/02/03/polar-bear-specialist-group-population-status-update-officially-postponed/, and http://polarbearscience.com/2014/03/20/polar-bear-status-changes-in-2013-deconstructed-with-a-map-to-the-good-news/

⁴¹http://polarbearscience.com/2014/05/30/iucn-polar-bear-specialist-group-says-its-global-population-estimate-was-a-qualified-guess/

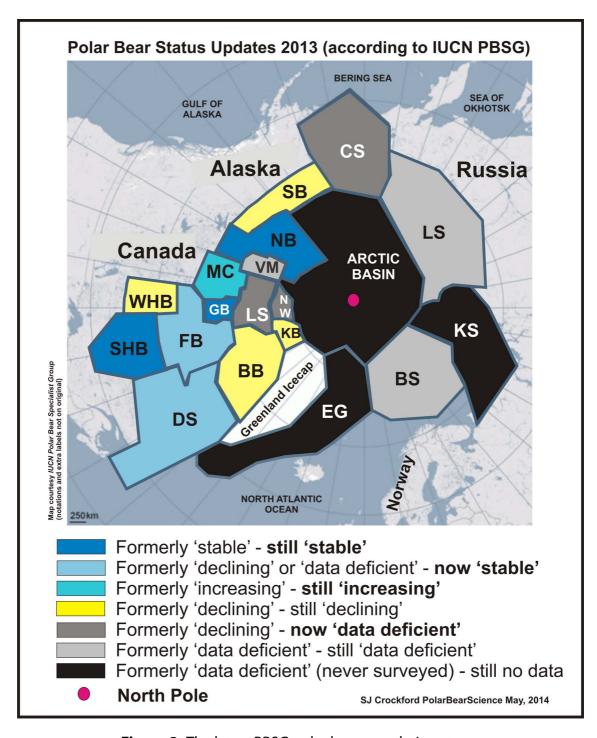


Figure 2: The latest PBSG polar bear population status

Published 14 February 2013. Note a couple of critical points: Chukchi Sea (CS), Norwegian Bay (NW) and Lancaster Sound (LS) have been upgraded from 'declining' to 'data deficient,' due to indications of increased population health but out-of-date population counts; Baffin Bay (BB) and Kane Basin (KB) are still listed as 'declining' because of presumed over-hunting. Southern Beaufort (SB) and Western Hudson Bay (WHB) are still listed as 'declining' but these caveats should be noted: the PBSG admits in this report that the last population count for SB, conducted 2004–2006, used flawed methodology, so a new count is currently underway (due 2014); while major future declines were predicted by PBSG biologists for WHB, a recent (2011) survey showed no decline in WHB since 2004, and no data supporting the claims of reduced survival of females and cubs have yet been published.

for the total number of polar bears in the circumpolar Arctic. Since 2005, this range has been 20-25,000. It is important to realize that this range never has been an estimate of total abundance in a scientific sense, but simply a qualified guess given to satisfy public demand. It is also important to note that even though we have scientifically valid estimates for a majority of the subpopulations, some are dated. Furthermore, there are no abundance estimates for the Arctic Basin, East Greenland, and the Russian subpopulations. Consequently, there is either no, or only rudimentary, knowledge to support guesses about the possible abundance of polar bears in approximately half the areas they occupy. Thus, the range given for total global population should be viewed with great caution as it cannot be used to assess population trend over the long term.

Let's look at the global population estimates in more detail. It appears that my recent essay revealing the PBSG 'clarification' of their population estimates inflamed people who were already confused and irritated by prior antics of the group, to which I had already drawn attention.

That essay prompted the response by author Zac Unger to which I referred above. ⁴² Unger rightly called out news outlets that referred to these numbers as 'fudged' or 'made up' – those descriptions are indeed unfair characterizations of what's been going on. However, he underplayed how truly outraged people have been by the PBSG's admission ('made quietly public' according to Unger) that their global population estimates were not what they have been made out to be.

Here is why it matters: the conservation determination of 'threatened with extinction' in the United States in 2008 (and 'vulnerable' by the IUCN in 2006)⁴³ is based entirely on mathematically predicted future population reductions, which by definition must anticipate a decline of at least 30% within three generations. Can such predictions be made with the required accuracy if scientific estimates are so imprecise as to be called 'qualified guesses' and the global population is actually unknown?

I have written a number of blog posts about the confusing and often misleading manner in which the PBSG has communicated its global polar bear population estimates over the past few years. For example, there was the laughable 2012 'State of the Polar Bear' graphic, ⁴⁴ commissioned by the PBSG at a cost of at least US\$50,000, ⁴⁵ and which, by their own admission to me, they did not review before publishing on their website. I pointed out a number of times that the graphic made a mockery of their subpopulation and global population estimates. ⁴⁶ The PBSG did not fix the graphic or remove it after the issues were brought to their attention. However, when the new status report went up in February 2013, the graphic disappeared without mention. ⁴⁷

More recently, I pointed out the bizarre accounting methods that the PBSG has

⁴²See p. 5.

⁴³http://polarbearscience.com/2012/12/26/did-the-pbsg-game-the-polar-bear-listing-process/

⁴⁴http://polarbearscience.com/2013/01/17/update-polar-bear-population-now-22600-32000-when-tallied-by-nation/

⁴⁵http://polarbearscience.com/2013/02/10/misleading-state-of-the-polar-bear-graphic-cost-advocate-scientistsmore-than-us50000/

 $^{^{46}} http://polar bear science.com/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-still-not-fixed/2013/04/01/misleading-state-of-the-polar-bear-graphic-state-of$

⁴⁷http://polarbearscience.com/2014/02/14/polar-bear-population-now-officially-13071-24238-says-iucn-polar-bear-specialist-group/

been using to arrive at a global population estimate. Over the last ten years, it has quietly dropped four subpopulations, representing some 5700 putative bears, that were previously included in their population tables, and which therefore clearly contributed to past global totals. However, over this time, the stated global estimate remained the same: 20–25,000.⁴⁸

I made these dropped numbers an issue⁴⁹ to highlight the ludicrousness of this practice. The PBSG now say (see above quote) they were responding to 'public demand' in providing a global estimate and that it was never meant to be an accurate representation of the actual total. This admission is almost certainly a response to feedback they received after my blog posts drew attention to what they were doing. They seem to have thought their 'clarification' would resolve the issue, but people are now even angrier.

Here's why: the fact that the PBSG's 'global estimates' represented only the sub-populations for which some relatively recent counts had been attempted, leaving out almost half of all regions where polar bears live, was a point almost never mentioned when the number was cited in peer-reviewed papers and in their own meeting reports. In contrast, I have repeatedly pointed out that because the PBSG global estimates left out a number of subpopulations that had never been surveyed and that the estimates given were therefore nowhere near an accurate representation of the total, even if that was not my primary emphasis. ⁵⁰

As noted above, generating a global population estimate for polar bears was an explicitly-stated high-priority objective for the PBSG from its very inception in 1968. Despite 45 years of research, the PBSG is still nowhere near attaining that goal. Somewhere along the way, they should have said so explicitly. The chairman's email to me, with the PBSG's intended footnote caveat, is completely inadequate and too long after the fact.

In his essay,⁵¹ Zac Unger pointed out that Arctic research is difficult, dangerous, and expensive, as if these factors absolve PBSG researchers from being forthright about their progress. I say that's hogwash.

As I noted in a blog post a few weeks ago,⁵² the PBSG recently held an 'intersessional meeting' (i.e. one that does not generate a proceedings volume, as do their 'working meetings'). At this get-together, they finally made a formal resolution to take concrete steps toward getting population estimates for polar bears that live in Russian territory and acknowledging the research conducted by Russian polar bear biologists.⁵³

Res#2-2014:Support for scientific studies of polar bears in the Russian Arctic The IUCN Polar Bear Specialist Group

⁴⁸http://polarbearscience.com/2013/07/15/global-population-of-polar-bears-has-increased-by-2650-5700-since-2001/

⁴⁹ http://polarbearscience.com/2014/02/18/graphing-polar-bear-population-estimates-over-time/

⁵⁰http://polarbearscience.com/2012/10/21/pbsg-polar-bear-population-assessment-made-simple/, polarbearscience.com/2013/07/15/global-population-of-polar-bears-has-increased-by-2650-5700-since-2001/, and http://polarbearscience.com/2014/03/20/polar-bear-status-changes-in-2013-deconstructed-with-a-map-to-the-good-news/

⁵¹See p. **5**.

⁵²http://polarbearscience.com/2014/07/01/polar-bear-specialist-group-just-had-another-secret-meeting/

⁵³Res#2-2014, copied below, published June 26, 2014. http://pbsg.npolar.no/en/meetings/resolutions/17.html

Recognizing that Article VII of the 1973 Agreement for the Conservation of Polar Bears calls for each Contracting Party to ...consult with other Parties on the management of migrating polar bear populations, and exchange information on research and management programs; and

Recognizing that at the 2014 PBSG meeting members learned of significant new work conducted by Russian scientists;

Commends Russia's recent investment in gathering scientifically rigorous data and other sources of relevant information regarding polar bears within their jurisdiction and shared populations; and

Recommends continued support for polar bear research, monitoring and management activities across Russian territory;

and also Recommends:

- Enhanced focus on collaborative research across the Russian Arctic as an important first step in closing gaps in existing polar bear population status and trend information;
- Support for publication of Russian polar bear and related research in peer reviewed international journals;
- Translation of Russian language reports related to polar bears and the ecosystems of which they are a part;
- Consultation with relevant external experts in both the design of research and monitoring protocols and where useful, the analysis of data to assure maximum benefit of new independent and collaborative work;
- Continued participation by a diversity of Russian organizations and Institutes who are actively engaged in scientific research or monitoring with the PBSG.

That it took until 2014 for the PBSG to acknowledge that they have been paying lip service to what has been going on with polar bears in Russia is truly astonishing. That this group of scientists, charged by Arctic governments with taking the pulse of the world's polar bears – and whose word on polar bear conservation health we are encouraged to accept as gospel – could get away with ignoring virtually half of the world's polar bears for so long is a travesty of enormous proportions. The \$50,000.00 spent on the misleading 'State of the Polar Bear' graphic would have made a big dent in some of the above recommendations, such as the translation of Russian reports.

Unger concluded his 2014 essay on this issue by stating the following about the PBSG:

Allowing the public to believe that the [predicted population] decline will be linear and predictable just sets people up for a perverse kind of disappointment when occasional good news deviates from the predicted path.

'Occasional good news'? That seems to be another jab at blog posts I've written but if it was true, I would agree. However, as I pointed out at the beginning of this essay, the good news about polar bears over the last few years has not only been frequent

and consistent, it has overwhelmingly contradicted the assumptions and predictions that the PBSG biologists have made.

I want to know how polar bears are doing – without the hyperbole, scaremongering, half-truths and withholding data. I'm sure there are colleagues and members of the public who want the same. I am optimistic my blog will open the eyes of some of the scientists who review academic papers on polar bear issues and who sit on committees charged with assessing polar bear conservation status, if that hasn't happened already. I hope these colleagues will become a bit more critical of statements being made by the current crop of polar bear biologists (especially members of the PBSG) and demand a higher standard of science.

As it stands, I can only conclude that polar bears are not in trouble at present, despite recent variations in sea ice coverage, and that computer models used to predict a future decline are simply not valid. ⁵⁴

3 Conclusions

To say that I am dismayed at the behaviour of polar bear field researchers over the last ten years or so is an understatement. It makes me fearful for the state of science itself. Their conservation bias, which was always present but usually understated, has escalated to a deplorable level. The lack of critical scientific thinking is obvious now in everything polar bear specialists say to the media, in every presentation they make and every scientific paper they publish. Their determination to keep the conservation status of polar bears as 'threatened with extinction' worldwide – regardless of the present health of polar bear populations, problems with sea ice projections, and noted issues with their predictive models – reveals that PBSG members and associates are simply agenda-driven collectors of data rather than objective scientists who are a bit too emotionally attached to the animals they study. That is a very unhealthy place for polar bear science to be and it needs to change.

⁵⁴http://polarbearscience.com/2014/07/05/are-polar-bears-really-endangered/

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For further information about the GWPF or a print copy of this report contact:

The Global Warming Policy Foundation 10 Upper Bank Street, London E14 5NB T 020 7006 5827 M 07553 361717

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