

<http://www.theguardian.com/environment/2013/nov/01/live-webchat-save-polar-bears-climate-change?commentpage=1>

Live webchat: What can be done to save polar bears? Nov. 6 2013

I've copied below the questions and PBI Answers from *The Guardian* webchat (leaving out what were merely comments). I've bolded a few points – see especially #4 & #9:

1. [Henforthe](#)

[01 November 2013 8:26pm](#)

“On the frontline of those changes are the bears of western Hudson's Bay, Canada, the southernmost population of polar bear. Scientists believe they can best predict the future for polar bears under climate change, by studying these bears.”

I know this area quite well and in many conversations with local Inuit they are often quite opposed to the idea that polar bears are threatened. This might just be because they see any conservation measure as a threat to their hunting traditions but perhaps they are more familiar with long-term polar bear behaviour than outsiders. How do modern conservation measures intermesh with what [they like to refer to as 'IQ'](#)?

PS, as for the southernmost population of polar bears, surely that would be the population of *southern* Hudson Bay?

[PBI Amstrup Henforthe](#)

[06 November 2013 3:01pm](#)

The southern most population is indeed Southern Hudson Bay. Yes, indeed, some local people are “opposed to the idea that polar bears are threatened.” **But this is not about someone's idea about which we can debate the merits.** The Laws of physics require the world to warm as GHG concentrations rise. A warmer world can hold less sea ice and we have no evidence that polar bears can survive in anything like current distribution or numbers without sea ice. **Already we are seeing declining physical condition, declining physical stature, and declining survival rates in western Hudson Bay, and the Beaufort Sea of Alaska.** Ultimately, these affects will spread to all of the populations if we don't stop the warming of the world. A small amount of review of the available scientific information, shows clearly this is not about someone's idea.

2. [Bonzaboy](#)

[01 November 2013 10:36pm](#)

What about relocating them to the Antarctic? I know this might impact the local (Antarctic) wildlife significantly, but it might work as a stopgap measure until we can figure out how to reverse global warming and re-sequester the carbon.

[PBI Krista Bonzaboy](#)

[06 November 2013 3:08pm](#)

We find there are a lot of people who are working hard to try to save polar bears. **We know a melting habitat is the biggest threat facing polar bears these days, and most of us have seen video or photographs of polar bears swimming long distances between ice floes.** And when someone suggests placing big rafts in the ocean to facilitate polar bear survival or moving polar bears to Antarctic it comes as no big surprise.

First off, polar bears main food resource is the ring seal and they rely on the sea ice as a hunting platform. The Arctic sea ice plays a critical role in the arctic food chain. Sea salt trapped inside the ice make it porous, the pores house algae and other microorganisms that form the first link of the arctic food chain—one that begins with small life forms and continues up to fish, seals and finally polar bears.

Penguins in Antarctica are not adapted to having a surface predator like a polar bear in their ecosystem. Having a polar bear to contend with would be devastating to the penguin population.

3. [rancidfessant](#)

[02 November 2013 6:11pm](#)

You can't take anything said at the Guardian seriously can you?
Polar Bears are not the largest carnivore in the world [Elephant Seals are](#).

[PBI Amstrup Matthew2012](#)

[06 November 2013 3:14pm](#)

I call polar bears the largest non-aquatic predator. They are marine mammals (not land mammals) because they depend on the productivity of the marine system for their survival, but unlike the whales and seals they are not aquatic. They access that productivity at the ice-air-water interface.

4. [MarkBLR](#)

[02 November 2013 6:45pm](#)

There was a paper in *Science* magazine last year ([link ...](#)) indicating that polar bears became a distinct species about 600kya (+/- 300k years).

This means that they have survived **at least two** (and possibly eight) previous inter-glacials, in particular the Eemian (130kya to 110kya), when temperatures in the Arctic were 5 to 8 degrees Celcius warmer than current temperatures for several thousand years.

Note that their numbers apparently decreased significantly during the Eemian, and slowly increased as temperatures cooled, but "climate change" was not enough on its own to make them extinct.

Empirical evidence from the 1950s onwards shows that the "unprecedented" warming from 1975 to 2000 was a period of **increasing** polar bear numbers.

This empirical evidence also shows that the greatest anthropogenic threat to polar bear numbers is lead poisoning, and the "solution" is to impose a hunting ban.

On the frontline of those changes are the bears of western Hudson's Bay, Canada, **the southern-most** population of polar bear.

...

Some female polar bears are losing so much fat they can no longer produce healthy cubs.

My question is : Why are you generalising from special cases ?

[PBI Amstrup MarkBLR](#)

[06 November 2013 3:10pm](#)

Polar bears have indeed survived at least the last interglacial and probably the previous (between the Holstenian and Wisconsin). However, the warmest annual mean temperature during either of those was about 1 degree celcius warmer than today. Summer temperatures in portions of the Arctic were up to 5-8 degrees warmer, but it is the annual average that is really telling. **All available evidence suggests that ample sea ice to support large numbers of bears persisted in both interglacials just as it did in the less warm interglacial between the Wisconsin glaciation and the Holocene (the interglacial we are in right now).** The difference is that those warmer periods were part of the natural cycle of how much solar energy reaches earth during different stages of our orbit around the sun. **The current warming is not a cycle and can only be stopped if we take action.**

5. [hollieindia](#)

[03 November 2013 12:00pm](#)

This comment has been chosen by Guardian staff because it contributes to the debate

I am 5 years old and i love polar bears, especially the baby cubs. I dont want them to disappear, i love them very much. what can we do for them. i am writing a polar bear booklet with my mummy for school and we would like lots of things about polar bears to help me please. i want to know how we can help to save then and why they are going.

written by mummy....dictated by 5 year old.

Kind responses please.

[PBI_Krista_hollieindia](#)

[06 November 2013 3:09pm](#)

We love cubs too! You can learn all about moms and cubs by checking out the fun facts about polar bears

<http://www.polarbearsinternational.org/about-polar-bears/faqs>

Although climate change has greatly affected the polar bear's sea ice habitat, scientists emphasize that it's not too late to take action on this issue—and each of us can help: at home, work, school, and in our communities. **Here are five tips for reducing your carbon footprint and helping the bears.**

1. Turn off the electronics when they are not in use such as lights, TV, video player, stereo, and computer
2. Wash your clothes in cold or warm water and hang-dry your clothes
3. Buy local and/or organic when possible or grow your own vegetables in a pesticide-free garden
4. Eat less meat (adults and kids)
5. Don't run the water unnecessarily (adults and kids)

You can also join us today for a live webcast

WEDNESDAY, NOVEMBER 6 at 11:00 AM CENTRAL - JUST FOR KIDS

Polar Bear Senses: Learn how polar bears rely on their amazing senses to survive the arctic chill.

<http://www.polarbearsinternational.org/myplanetmypart>

6. [paulmckeown](#)

[03 November 2013 3:27pm](#)

Given the inevitable climate change in the Arctic, surely the die is already cast? If polar bears remain alive in 2113, they will be in captivity.

[PBI_Amstrup_paulmckeown](#)

[06 November 2013 3:11pm](#)

My work and that of several other scientists has shown definitively that there is not a tipping point in the sea ice. **Sea ice extent is directly but inversely related to temperature. Higher temp means less ice!** We have shown that we still have time save enough sea ice to save polar bears over much of their range. In doing so we also will benefit the rest of life on earth.

7. [ID9809505](#)

[04 November 2013 12:02pm](#)

Questions to Steven Amstrup and Krista Wright:

What dietary options are there? Is providing food considered an option? Due to Arctic sea-ice melt, are the creation of artificial habitats for seals and therefore polar bears a possibility?

[PBI_Krista_ID9809505](#)

[06 November 2013 3:06pm](#)

Polar bears have evolved to feed on seals, specifically seal fat, the highest calorie food source possible. The bears prey on both ringed and bearded seals. Ringed seals, which are smaller, are the most accessible, especially to younger bears and females. Male polar bears also hunt bearded seals, which are larger. When hunting is good, polar bears eat only the blubber in order to build up the fat reserves they need to sustain themselves between meals. They leave the carcass for scavengers, such as arctic foxes, ravens, and younger bears.

All the other foods that polar bears may eat are opportunistic feedings. Most of these foods, with the exception of beached whales, don't provide enough calories to sustain the polar bear's massive body size or to build up the bear's own fat reserves.

As far as supplemental feeding polar bears, this is not a long-term solution. Although climate change has greatly affected the polar bear's sea ice habitat, scientists emphasize that it's not too late to take action on this issue—and each of us can help: at home, work, school, and in our communities. **You can also help polar bears by becoming an active citizen through voting for elected official who support a climate policy and supporting businesses who also support the true cost of a carbon based economy.**

[PBI_Amstrup_ID9809505](#)

[06 November 2013 3:43pm](#)

We have answered these questions multiple times please go to polarbearsinternational.org and search for fake ice and myths and misconceptions.

8. not included – another question from a 5 year old, answered, about polar bear eyes...

9. [tipoftheiceberg](#)

[05 November 2013 8:37pm](#)

My question is a general one about how polar bear reporting is carried out. What are the risks and pitfalls of this type of reporting? **Is it appropriate to make anecdotal reports about individual bear incidents (like attacks by or deaths of bears) and then link these directly to climate change?**

As a supporter of climate change reporting and even campaigning for decarbonisation, my question is motivated by wanting to see good sound coverage which does not fuel the climate-denier/ false skeptic community.

Is there a danger in linking specific deaths or behaviour patterns of individual polar bears to climate change, without being very clear of the scientific 'uncertainty' involved? Is it better to lead with the 'data first', given that the data and scientific observations Arctic wide, can often prove the point with more resilience than an anecdote.

I posted this earlier but my post was removed by the moderator, possibly because I linked to the Guardian's own coverage and then to a Norwegian newspaper story which had challenged the reporting. (Though I felt it has done so extremely fairly and thoroughly, citing good science, interviewing the researchers involved and with no personal attack on the authors)

Thanks and look forward to reading the debate tomorrow.

[PBI_Amstrup tipoftheiceberg](#)

[06 November 2013 3:02pm](#)

Good question. Just as the natural chaos in the system prevents us linking any particular storm, drought, or flood event to climate warming, **it means we cannot state that any single bear/human encounter is the result of climate change.** But the opposite also holds. Planetary physics require the world to warm as GHG levels in the atmosphere rise. **We have predicted for decades that as the world warms there will be more frequent and severe weather fluctuations, and similarly, as polar bears are increasingly nutritionally stressed by longer fasting periods, the likelihood of negative bear/human encounters will rise.**

10. [StevenGoddard](#)

[06 November 2013 12:28am](#)

Polar Bear populations are doing just fine. One of the largest groups lives by the Hudson Bay, which is ice-free for four months every year.

Summer ice extent was up 60% from last year across the Arctic.

[PBI Amstrup StevenGoddard](#)

[06 November 2013 3:03pm](#)

The supposed 60% ice recovery is a reference only to how much more ice there was in Sept. 2013 compared to Sept. 2012. It is not at all suggesting some kind of grand recovery. The Sept. ice extent has been declining by over 12% per decade since the late 1970s. There is lots of annual variation in that declining trend-meaning that some years have been above and some below the declining trend line. 2012 was a record low and fell way below the trend line. **The supposed recovery in 2013 only brought us back up to the level of the long term trend. The minimal ice extent in 2013 was the same as it was in 2005. But back in 2005 the low (which was a record low at that time) set off alarm bells.** We have seen no recovery, just the inter-annual variation we always have had imposed over a lower and dropping baseline!

11. [kentishtowngirl](#)

[06 November 2013 12:35pm](#)

I have heard that there is an increase in polar bear poaching (mostly from Russia) as a response to a growing demand among the newly rich in China and Russia for bearskin rugs. Is this the case and if so what is being done to stop it?

[PBI Amstrup kentishtowngirl](#)

[06 November 2013 3:24pm](#)

There is some evidence that this is occurring, but documenting it and its extent is difficult. Ultimately, to the extent this is occurring, we can control it only by knowing where and when it is occurring and regulating movement of polar bear parts across borders. But there is little documentation at this point, so managers are still trying to figure out the where, when and how many. It is important to keep in mind that as the sea ice diminishes, we will see greater human access to the remote regions preferred by polar bears. Hence, not only are the bears going to be losing their vital habitat, they will be more exposed to other human intrusions such as hunting, contaminant spills, etc.

12. [ID5911416](#)

[06 November 2013 12:39pm](#)

I am not sure if someone has already mentioned this but I was interested to know what research has been done so far into the theory that the polar bear population like other marine mammals may be decreasing due to an increase in chemicals in their environment. (apparently making them infertile)

Some kind of chemical that leaches from plastics, namely electrical equipment?

Thanks in advance :)

[PBI Amstrup ID5911416](#)

[06 November 2013 3:29pm](#)

Atmospheric circulation carries contaminants from population centers into portions of the Arctic. In some areas this has resulted in very high contaminant burdens in polar bears that threaten their immune systems and ability to reproduce. Studies show that with warming of the world and melting of the ice, increasing amounts of contaminants are being carried into the Arctic. **So, whereas contaminants are a problem, climate warming is making the problems they present even more serious. Just one more reason to control the rise in global temperatures.**

13. [MissFerrara](#)

[06 November 2013 12:46pm](#)

My Year 6 class are very interested in global warming and how it is effecting polar bears. They are desperate to find out more and are very excited about the live chat. I have listed their questions below:

How long do you think it will be before polar bears become extinct?

What are the most effective ways of slowing global warming down? What can we do to help?

Will polar bears really choose to eat humans if they are forced to live on land?

Can polar bears even exist on land?

Is artificial ice the answer?

What temperatures do polar bears live best in?

Is the answer to place more polar bears in captivity in order to avoid extinction?

What will be the next animals to face extinction due to global warming?

Our school blog will soon be showcasing some of the work we will be doing on global warming.

Please click on the link: <http://brwblog.primaryblogger.co.uk/>

Thank you for your time and we look forward to reading the answers.

[PBI Krista MissFerrara](#)

[06 November 2013 3:36pm](#)

Miss Ferrara

The Polar Bears International website has all the information you would ever want to know about polar bears. You should visit our FAQ's

<http://www.polarbearsinternational.org/about-polar-bears/faqs> .

We also have educational resources that you might find helpful to use in our classroom.
<http://www.polarbearsinternational.org/for-teachers/tools-and-materials>

And now to answer some of your questions.

How long do you think it will be before polar bears become extinct?

A: Scientist are predicting that we could lose 2/3 of the polar bear population by mid-century if we don't act on reducing our green house gas emissions.

What are the most effective ways of slowing global warming down? What can we do to help?

A: Reducing our energy consumption and community wide action on reducing greenhouse gas emissions. We hope you will consider joining us in our Save Our Sea Ice campaign.

<http://www.polarbearsinternational.org/our-work/community-outreach/save-our-sea-ice>

Will polar bears really choose to eat humans if they are forced to live on land?

A: Polar bears don't really choose to eat humans. They eat ring seals and other marine mammals. The less time polar bears spend on land the less time they have to hunt seals out on the ice, which could lead to more instances where they come in to human settlements looking for food. These human-bear interactions could lead to people being injured or killed.

Can polar bears even exist on land?

A: Polar bears are marine mammals and make their living on the sea ice. Although they can spend some time on land they will not be able to make a living or eat foods that have enough calories to support the largest bear with in the species of bears.

<http://www.polarbearsinternational.org/media/video/what-do-polar-bears-eat>

Is artificial ice the answer?

A: That is a great question and one that we get all the time. Here is an answer provide by Dr. Steven Amstrup.

<http://www.polarbearsinternational.org/could-floating-platforms-be-used-save-polar-bears-sea-ice-losses>

What temperatures do polar bears live best in?

A: Polar bears like ice. So they prefer to live in temperatures that are below freezing.

Is the answer to place more polar bears in captivity in order to avoid extinction?

A: No, the answer is reducing our carbon foot-print.

What will be the next animals to face extinction due to global warming?

A: Visit the IUCN Red List of Endangered Species to learn more about the species who are

facing extinction.

<http://www.polarbearsinternational.org/could-floating-platforms-be-used-save-polar-bears-sea-ice-losses>

Our school blog will soon be showcasing some of the work we will be doing on global warming. Please click on the link: <http://brwblog.primaryblogger.co.uk/>
Thank you for your time and we look forward to reading the answers.

Thanks for your questions! WE look forward to seeing you on the tundra.

Check out one of our webcasts that are LIVE from the tundra!

<http://www.polarbearsinternational.org/our-work/educational-programs/tundra-connections-schedule>

14. [JRanderson](#)

[06 November 2013 2:41pm](#)

Questions from Apple class at Orchard Primary School in London:

Is it true that polar bears have black skin under their fur?

How do polar bears find their way around the arctic when everything looks the same?

What will happen to the polar bears if the ice keeps on melting? What will happen to us?

[PBI Leah JRanderson](#)

[06 November 2013 3:04pm](#)

Hello Apple class at Orchard Primary! Thank you for submitting your questions today.

1. Yes! Polar bears have black skin under their fur.

2. Polar bears learn a lot from their mothers, as they stay together for 2.5 or 3 years as cubs. They have a great sense of smell and scientists are still studying why and how polar bears have "site fidelity" - or the reason why they know to return to certain areas each year.

3. Polar bears will not survive if their sea ice habitat continues to melt.

Climate change will affect all aspects of the planet and it depends on where you live in particular as to what the impacts will be.

15. [KingInYellow](#)

[06 November 2013 3:29pm](#)

What can scientists do to counter the misinformation on the status of polar bear populations ?

For example, there have been numerous cherry picked claims posted on this article about how polar bear populations are increasing. Informed people/scientists know this is due to a few polar bear groups are increasing, but that this does not represent the net polar bear population, and there are many groups in severe decline. [my bold]

All the best

[PBI_Amstrup KingInYellow](#)

[06 November 2013 3:36pm](#)

This certainly is true, but it is not just up to scientists to help. All of us need to direct people to the right information (e.g. PBI's website, the PBSG, NSIDC, NASA). So thank you for your help in this important task.

16. [KingInYellow](#)

[06 November 2013 3:32pm](#)

Given the decline in Arctic Sea Ice, how can scientists describe in bullet point format the issues this causes for Polar Bears ?

For example, with the loss of sea ice how to Polar bears suffer from:

- loss of habitat
- pressure on reproduction
- how their prey (seals etc) will decline
- etc.

All the best

[PBI_Krista KingInYellow](#)

[06 November 2013 3:44pm](#)

Climate warming leads to:

Altered sea ice which results in:

-less food

-increased movement

-longer fasting

All of these factors lead to having a reduced body condition which leads to:

-fewer & smaller [see below]

-lower cub survival

Which lead to over all population decline.

17. [Kevin Watkinson](#)

[06 November 2013 3:37pm](#)

Do Polar Bears belong in zoos?

[PBI_Krista Kevin Watkinson](#)

[06 November 2013 3:53pm](#)

Kevin, great question. Dr. Steve Amstrup wrote a great article for the Association of Zoos and Aquariums monthly publication Connect. Since it is complex question, I think the article will provide you with the best answer.

<http://www.aza.org/Membership/detail.aspx?id=26836>

All there was before I had to go to work.

Updated at 6:17 PM

Re: 16. added by [PBI Krista KingInYellow](#)

[06 November 2013 3:58pm](#)

Oops. forgot the word cubs on fewer & smaller cubs. Hopefully you made the connection.

Climate warming leads to:

Altered sea ice which results in:

-less food

-increased movement

-longer fasting

All of these factors lead to having a reduced body condition which leads to:

-fewer & smaller cubs

-lower cub survival

Which lead to over all population decline.

That's it. There were other comments but these seem to be the only *questions* that got answered by the PBI team.

A pretty meager result for all the hype, I'd say. Nothing new or unexpected: pretty 'canned' answers with an emphasis on keeping the level of "stop global warming, reduce your carbon foot-print."