

# Polar Bear Politics

## Underestimating the survival capacity of one popular bear

Jennifer Marohasy

Are polar bears really threatened by global warming or are they being opportunistically exploited by scientists and activists to sell a particularly bleak and brittle story because of their iconic status?

### A History of Polar Bears

A couple of years ago, a friend of mine decided we should visit Sea World, a theme park at Queensland's Gold Coast. She insisted that we get there early and that we visit the polar bears first.

I was surprised that they even had polar bears at a theme park in subtropical Queensland. Polar bears can successfully live and breed in zoos around the world, and do so, from tropical Singapore to hot, dry Arizona. Indeed, to quote from the exhibition at Sea World, 'polar bears are capable of flourishing in the wild under climatic conditions which are most un-Arctic'.

We watched the two bears for the best part of an hour. Our teenage children were as enthralled as we were to see these gigantic white animals throw rubber and plastic objects into the pool, jump in after them, 'drown them' and repeat the routine. There was no ice or snow, but the bears seemed most content.

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I was also to learn that polar bears have black skin under all that white fur, can swim 10 km per hour for several hours at a time and run as fast as 40 km per hour for short distances.

In the wild, polar bears mostly feed on ringed seals, especially young seal pups. But they don't usually eat the whole seal. Rather, they take the fat from under the seal's skin and throw the rest away.

Ringed seals are few and far between at the Gold Coast, so the Sea World bears get fed Aussie tucker including kangaroo, chicken, fish, fruit, vegetables, cheese, yoghurt and even the occasional muesli bar and ice cream. On special occasions they get their favourite food—apparently, water melon.

Polar bears can obviously survive where there is no snow and ice and are clearly not too fussy in their eating habits, but, in the wild, their distribution is limited to the Arctic or, to be more precise, the circumpolar basin.

There are no polar bears in Antarctica. The species evolved from the Northern Hemisphere brown bear. It is thought that a small population of brown bears became isolated during the last ice age. Rapid evolution subsequently occurred with colour, size, swimming ability and cold resistance coming under strong selective pressure over several generations.

The isolated population could have become extinct as a consequence of the climate change, but it didn't. In-

stead, it rapidly evolved into the largest land carnivore and a species perfectly adapted to life at the Arctic.

There are now thought to be about 25,000 polar bears existing as 19 relatively discrete populations across Norway, Denmark, Russia, Alaska, Greenland and Canada.

Forty years ago, there were only about 5,000 bears, the worldwide population depressed by hunting. Then, in the 1970s, it was agreed to restrict hunting and, presumably as a consequence, population numbers have increased.

Most populations are still hunted, but under agreed quota systems. Greenland, however, does not limit the number of polar bears killed each year and there is concern that Greenland populations may be over-harvested. There is also some concern that while Russia has official bans on hunting, it occurs illegally in the Chukchi Sea.

### But the Arctic is Warming

On average, the world has warmed by only 0.6°C over the last 30 years and 0.8°C over the last 100 years. But the Arctic has warmed much more, and over the last two decades this warming has corresponded with a reduction in the extent of Arctic sea ice. It has been predicted in the scientific journals that there may be a 20–30 per cent reduction in sea ice extent by the year 2050.

The distribution of polar bears at the Arctic is influenced by the type of ice occurring in the region, with bears

tending to seek out thick first-year sea ice found in large ice floes. The bears use this sea ice as a platform for hunting ringed seals, with late spring considered a key hunting period when there are the most fat, recently-weaned seal pups. But the population density of polar bears does not correlate with, for example, the population density of ringed seals or sea ice. Indeed, while the extent of Arctic sea ice has generally reduced over recent decades, the number of polar bears has increased. Polar bears hunt other species of seal, including spotted and bearded seals, and also walrus, beluga whales and short-legged reindeer.

There is, nevertheless, much concern that polar bears are going to be adversely affected by global warming and, in particular, by any reduction in the extent of sea ice.

#### Polar Bears at Hudson Bay: A Case Study

Dream World doesn't have any resident polar bears, but they screen a 3-D documentary called *The Bears* at their Imax theatre. Towards the end of the movie, we are told that the survival of polar bears is threatened by global warming. We are told that, as a consequence of warmer springs, ice sheets were thinning earlier, the bear's hunting season had become shorter, and that polar bears at the Arctic were losing weight.

This was the finding from one study at Hudson Bay by Ian Stirling from the Canadian Wildlife Service. Indeed, the peer-reviewed article (*Arctic*, Volume 52, pages 294–306) concluded that:

From 1981 through 1998, the condition of adult male and female polar bears has declined significantly in western Hudson Bay, as have natality and the proportion of yearling cubs caught during the open water period that were independent at the time of capture. Over this same period, the breakup of the sea ice on west-

ern Hudson Bay has been occurring earlier. There was a significant positive relationship between the time of breakup and the condition of adult females (i.e., the earlier the breakup, the poorer the condition of the bears). The trend toward earlier breakup was also correlated with rising spring air temperatures over the study area from 1950 to 1990. We suggest that the proximate cause of the decline in physical and reproductive parameters of polar bears in western Hudson Bay over the last 19 years has been a trend toward earlier breakup, which has caused the bears to come ashore in progressively poorer condition. The ultimate factor responsible for the earlier breakup in western Hudson Bay appears to be a long-term warming trend in April-June atmospheric temperatures.

While the western Hudson Bay bears are thinner today than they were 20 years ago, there has not been a corresponding decline in population numbers. The population is considered stable at 1,200 bears and continues to be advertised as the major tourism attraction for the town of Churchill, which claims to be the polar bear capital of the world.

If you want a wildlife experience that includes polar bears, Churchill is a 'must visit'—it is the most accessible and best equipped destination in Canada, home to the largest and most southerly population of polar bears in Canada, and the wildlife enthusiast is



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guaranteed to see the largest gathering of polar bears anywhere in the world. You can catch the train from Winnipeg and, once at Churchill, be carried across the ice in a 'Tundra Buggy' to watch polar bears kill baby ringed seals.

The Churchill bears are considered somewhat unique in that they regularly congregate and then go into a semi-hibernation over summer. Most polar bears do not hibernate and do not congregate in any one place for any period of time.

Nevertheless, relying mostly on the study by Ian Stirling of this somewhat unique population of polar bears that congregates each year on the ice near Churchill, global warming is being promoted as a threat to the long-term survival of polar bears. This is a message now endlessly repeated in the popular press throughout the world. Indeed, it is on the basis of this study that documentaries such as *The Bears* assert that global warming threatens the very existence of polar bears, and it is on the basis of this study (and some more extrapolation) that polar bears were recently listed by the International Union for the Conservation of Nature (IUCN) as threatened with extinction.

Because of the universal popularity of polar bears, polar bears are effectively being exploited by activists as 'victims' of climate change. Here's an example of polar bear-as-victim in an article by Clifford Krauss that was published in the *New York Times*:

'People care about polar bears—they're iconic', noted Kassie Siegel, a lawyer at the Center for Biological Diversity. 'The reality of the threat to polar bears is helping to get the word out', she said, about the effects of climate change.

Her group, along with Greenpeace and the Natural Resources Defense Council, filed a petition with the United States government to list the polar bear as threatened as a way to push the American authorities to control greenhouse gas emissions, like carbon dioxide from cars.

The message has alarmed American polar bear hunters, who could be barred from bringing their trophies home from Canada, the only country from which they can legally do so. It has also run up against unbending opposition from local communities of Inuit, also known as Eskimos, and the Nunavut territorial gov-

ernment, which has expanded sport hunting in recent years.

Scientists have also become caught up in the campaigning and are making dubious and unsubstantiated claims. For example, the recent listing by the IUCN includes the following paragraph as justification for the conclusion that there is likely to be a 30 per cent decline in polar bear population numbers over the next 45 years:

There is little doubt that polar bears will have a lesser AOO [area of occupancy], EOO [extent of occupancy] and habitat quality in the future. However, no direct relation exists between these measures and the abundance of polar bears. While some have speculated that polar bears might become extinct within 100 years from now, which would indicate a population decrease of >50% in 45 years based on a precautionary approach due to data uncertainty. A more realistic evaluation of the risk involved in the assessment makes it fair to suspect population reduction of >30%.

When the IUCN report was launched on the 3rd May, the BBC misquoted the findings, stating that:

Polar bears are listed as Vulnerable to Extinction based on forecasts that their population will decline by 50% to 100% over the next 50 to 100 years.

When information about global warming and polar bears is misquoted, as it often is, it always seems to be in the direction of a more dire prediction!

Over the last 30 years, population numbers of polar bears have increased, while sea ice extent and area have decreased. While sea ice is important for the ringed seal, and ringed seals are the most common and widespread seal in the Arctic and the main food for polar bears, there is no evidence to suggest that polar bears won't simply adapt to less sea ice and change their hunting behaviour and preferred prey species if

necessary.

The Earth's climate has never been constant, and dramatic changes in climate have driven both extinctions and evolution. Sometimes climate change has been driven by volcanic eruptions, asteroid collision and the Sun. If the northern hemisphere hadn't undergone a period of glaciation about 250,000 years ago, and a group of brown bears had not become isolated and exposed to terrible hardship and repeated high mortality, there would be no such thing as polar bears today.

Over the last 100 years, there has been an increase in the amount of carbon dioxide in the atmosphere from the burning of fossil fuels and this is thought to be contributing to current global warming.

Recent increases in temperatures at the Arctic are already affecting the extent of sea ice in places such as western Hudson Bay, which is in turn affecting the length of the annual hunt for ringed seal pups by polar bears in this area. But there is no evidence to suggest that the numbers of bears are declining, let alone that the species is about to become extinct. Indeed, if Hudson Bay failed to ice-over one winter, these bears could travel north to find sea ice and ringed seals, or they might simply switch to hunting seals that prefer warmer weather.

The two bears living happily at Sea World on Queensland's Gold Coast, enjoying watermelons and muesli bars, are evidence of the capacity of this popular bear to enjoy warmer weather.

As a species, polar bears may be disadvantaged by global warming, but they are unlikely to become extinct.

**IPA**