



Climate change will trigger a dramatic and sudden decline in the number of polar bears, a new study has concluded. The research is the first to directly model how changing climate will affect polar bear reproduction and survival.

Based on what is known of polar bear physiology, behaviour and ecology, it predicts pregnancy rates will fall and fewer bears will survive fasting during longer ice-free seasons.

These changes will happen suddenly as bears pass a 'tipping point'.

Details of the research are published in the journal *Biological Conservation*. Until now, most studies measuring polar bear survival have relied on a method called "mark and recapture".

This involves repeatedly catching polar bears in a population over several years, which is cost and time-intensive.

Because of that, the information scientists have gathered on polar bear populations varies greatly: for example, datasets span up to four decades in the best studied populations in Western Hudson Bay and Southern Beaufort Sea, but are almost non-existent for bears in some parts of Russia.

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