

Institute for Coastal and Marine Research

SEMINAR

10

DAY

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MONTH

26

YEAR

Projected redistribution of penguins under climate change

In recognition of World Aquatic Animal Day

Species redistribute as climate change affects their habitat. Marine management tools must anticipate shifting distributions to limit the cumulative impacts of climate change and other anthropogenic threats.



JOSHUA WILSON

Josh is a PhD student based at the University of Southampton and the British Antarctic Survey in the United Kingdom. His research leverages global collections of tracking data to better understand drivers and dynamics of marine predator hotspots in the Southern Ocean. He is visiting Nelson Mandela University for a research placement to work with Prof Pierre Pistorius on a range of tracking projects.

Here we model the future suitability of penguin breeding and foraging habitat in the Southern Ocean using circumpolar colony locations and foraging telemetry data. We project end-of-century shifts using global climate models. Models projected a polewards redistribution of most species, and a major range contraction for emperor penguins, estimated to lose up to 70% of their core habitat. A low-emissions future correlated with reduced magnitudes of range shifts and contractions for all species. Results highlight that implementing proposed marine protected areas in Antarctica, and complementing them with additional management measures would shield key climate refugia and improve the climate resilience of penguins. As sentinel species, range projections of penguins warn of potential redistributions of terrestrial and marine ecosystems in Antarctica and the Southern Ocean.

**Friday, 10 April 2026, 13:00 - 14:00 SAST**

Ocean Sciences Campus, B Block, Conference Hall, Nelson Mandela Uni

Register for online or in-person:<https://forms.office.com/r/SYByXWBvpt>**British
Antarctic
Survey****CMR**
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RESEARCH**University of
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