Report highlights impact of changes in Antarctica

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A new report published Tuesday 24 May sends a strong message to countries responsible for Antarctic governance meeting this week in Berlin, that there’s a need for urgent action on minimizing climate change impacts in Antarctica and their far-reaching global consequences.

The report shows that Antarctic ice sheets are melting, the continent's climate is changing, its ecosystems are being impacted, and the Southern Ocean is warming, becoming more acidic and losing oxygen.

Changes in Antarctica have global impacts. Ice sheet contributions to global mean sea-level rise will put nearly a billion people at risk from coastal flooding, more so if the upper-end scenario of two-meter sea level rise by the end of the century is realized. Changing Antarctic climates mean impacts everywhere, and will be especially extreme on some continents.

Locally, changing climates are already affecting the region's iconic whales, seals, penguins, and the krill they rely on. Emperor penguins may be all but gone by the end of the century unless urgent action is taken. They are also encouraging the establishment of non-native species in the continent's ecosystems, an unprecedented threat to the continent's unique biodiversity and challenge to its management and conservation.

Professor Peter Convey BAS terrestrial ecologist and biodiversity specialist, and one of the report's co-authors says:

"This report highlights that Antarctica's ecosystems, on land and in the sea, are already facing strong pressure from climate change. Elements of its native biodiversity are showing sometimes rapid responses, providing clear warnings of how ecosystems at lower latitudes, and the human societies they sustain, will be impacted in future without urgent action."

Professor Steven Chown, Monash University, Australia, previous SCAR President and Director of Securing Antarctica's Environmental Future, who led the report says:

"Antarctica's changes have profound consequences for all of us. What's most unnerving is that we are documenting these changes already but are unsure how large they'll become. We could be facing unmanageable adversity in our lifetimes if we don't act with urgency."

The report provides the globally agreed view on changes occurring and those that will take place on the Antarctic continent and in its surrounding Southern Ocean. It makes clear that adhering to, and preferably exceeding, the Paris Climate
Agreement greenhouse gas emission reduction targets will substantially lessen both changes to the Antarctic and their wider implications for society.

Dr. Susie Grant, BAS marine biogeographer, and one of the report's co-authors says:

"This report sends a strong message to the Antarctic Treaty Parties that there's a need for urgent action on minimizing climate change impacts in Antarctica and the Southern Ocean, and that it's critical for information on the global consequences of Antarctic change to be communicated to the rest of the world."

The report is designed specifically for the Parties to the Antarctic Treaty, who are gathering in Berlin for their 44th Annual Meeting to consult on matters of common interest to Antarctica. The countries comprising the 54 Parties to the Treaty, and specifically the 29 Consultative Parties, are responsible for the environmental management of the Antarctic and Southern Ocean.

More information: The report is available on the SCAR website: scar.org/library/scar-publication-decadal-synopsis/

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