

New briefing paper on Arctic change

June 25 2020



The Arctic is changing rapidly affecting sea-level rise and local communities.
Credit: British Antarctic Survey

BAS researchers have contributed to a new briefing paper about the Arctic published this week (25 June 2020). Working with a team at the

Grantham Institute at Imperial College London, the paper provides a summary of Arctic change now and in the future.

Summary highlights of the paper are:

- The Arctic has warmed by around 2°C since 1850, approximately double the [global average](#). Even if the Paris Agreement successfully limits global warming to a further 0.5°C, the Arctic is expected to warm by at least another 1°C.
- The United Kingdom's (UK) [weather](#) is linked to conditions in the European Arctic. For example, high atmospheric pressure in the Nordic Seas divert damaging storms across the UK and mainland Europe, with the potential to cause societal disruption from flooding.
- It is possible, although presently unconfirmed, that alterations in Arctic conditions provoked the "Beast from the East" winter storm in 2018.
- Scientists need to take observations and improve their understanding of climatic processes in the Nordic Seas and the Arctic Ocean to fill gaps in knowledge about the links between the Arctic climate and the UK's weather; a risk identified by the Intergovernmental Panel on Climate Change (IPCC).
- The UK has significant research expertise and experience to understand how [global warming](#) will change the Arctic's environment and affect the UK.
- This strength, allied with the capabilities of the UK's new polar research ship the RRS Sir David Attenborough, warrants an integrated program of research, including advanced numerical modeling, to improve predictions of future extreme weather events.
- Such a program must acknowledge that the Arctic is politically an increasingly congested and contested space. It should be designed in collaboration with key Arctic and near-Arctic nations

to increase the UK's influence and ability to prepare, respond and plan for future extreme weather events.

BAS author Professor Mike Meredith, who's head of the Polar Oceans team at BAS, says:

"This is an important new briefing document that emphasizes the role that the Arctic plays on weather, climate and diverse aspects of society in the UK. With the exciting new capability that the RRS Sir David Attenborough will provide, we'll soon be better able than ever to research the role of the Arctic, and advise policymakers on how to respond to the rapid changes there."

Provided by British Antarctic Survey

Citation: New briefing paper on Arctic change (2020, June 25) retrieved 10 May 2024 from <https://phys.org/news/2020-06-paper-arctic.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.