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Authors

Authors 1

Author Name	Stroeve, Julienne
Type of Name	Personal
Email	
Affiliation	Centre for Earth Observation Science - University of Manitoba
ORCID ID	

Authors 2

Author Name	Crawford, Alex
Type of Name	Personal
Email	alex.crawford@umanitoba.ca
Affiliation	Centre for Earth Observation Science - University of Manitoba
ORCID ID	

Authors 3

Author Name	Ferguson, Steve
Type of Name	Personal
Email	
Affiliation	
ORCID ID	

Authors 4

Author Name	Stirling, Ian
Type of Name	Personal
Email	
Affiliation	
ORCID ID	

Authors 5

Author Name	Archer, Louise
Type of Name	Personal
Email	
Affiliation	
ORCID ID	

Authors 6

Author Name	York, Geoffrey
Type of Name	Personal
Email	
Affiliation	
ORCID ID	

Authors 7

Author Name	Babb, David
Type of Name	Personal
Email	
Affiliation	
ORCID ID	

Authors 8

Author Name	Mallett, Robbie
Type of Name	Personal
Email	
Affiliation	
ORCID ID	

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Data and Resources

URL	https://canwin-datahub.ad.umanitoba.ca/data/dataset/f8564f96-cccc-410e-947a-ada219056653/resource/5c8f2982-0083-4582-a6c2-47d10969a52f/download/s43247-024-01430-7.pdf
Name	Ice-free period too long for Southern and Western Hudson Bay polar bear populations if global warming exceeds 1.6 to 2.6 °C
Description	Hudson Bay has warmed over 1 °C in the last 30 years. Coincident with this warming, seasonal patterns have shifted, with the spring sea ice melting earlier and the fall freeze-up occurring later, leading to a month longer of ice-free conditions. This extended ice-free period presents a significant challenge for polar bears, as it restricts their hunting opportunities for seals and their ability to accumulate the necessary body weight for successful reproduction. Drawing on the latest insights from CMIP6, our updated projections of the ice-free period indicate a more spatially detailed and alarming outlook for polar bear survival. Limiting global warming to 2 °C above pre-industrial levels may prevent the ice-free period from exceeding 183 days in both western and southern Hudson Bay, providing some optimism for adult polar bear survival. However, with longer ice-free periods already substantially impacting recruitment, extirpation for polar bears in this region may already be inevitable.
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Resource Category	documents

Related Datasets

Title	CMIP6 Hudson Bay Sea Ice Thickness Phenology
URL	https://canwin-datahub.ad.umanitoba.ca/data/en/dataset/cmip6-hudson-bay-sea-ice-thickness-phenology