



***As the Russian invasion of Ukraine continues, the resulting geopolitical tensions may impact our ability to understand ongoing Arctic change. A recent study published in Nature Climate Change by INTERACT, a network of research stations in the Arctic, sheds light on the potential implications that such prolonged conflict may have on our current (and future) perspective over one of the world's most sensitive and dynamically changing regions.***

The harsh and understudied Arctic is exposed to the most rapid climatic changes on the globe. Our understanding of the implications of such changes relies heavily on ground-based

observations from research stations scattered across the vast and remote region. By examining the representativeness of the most extensive research station network of the Northern Hemisphere, INTERACT (<https://eu-interact.org/>), López-Blanco and colleagues examined how the ongoing war in Ukraine and the exclusion of Russia from international fora, may bias our view on Arctic change.

*“Our study reveals that although an intact INTERACT network consistently shows biases in such key ecosystem variables, the exclusion of the Russian stations severely increases this bias”, says Dr. Efrén López-Blanco (Aarhus University, Denmark), lead author of the study.*

Based on this recent study, the potential loss of Russian research stations could adversely affect the capacity to track global ecological responses to climate change including permafrost degradation, vegetation shifts, and carbon emissions. *“Excluding Russian research stations and all the ground-based knowledge they may provide, represents a shift in baseline conditions that is of the same magnitude as the anticipated climate change shifts by the end of the century,”* concludes Efrén López-Blanco.

INTERACT is built on international friendships and collaborations that have endured over half a century and even survived the Cold War period. INTERACT collaborates widely with station managers, researchers, Indigenous and local people to observe, understand and respond to environmental change. INTERACT reaches out to Governments, the public and students around the World. However, its geographical coverage of environments and ecosystems is challenged by current geopolitical tensions. *“INTERACT has now quantified the resulting bias in our understanding of Arctic ecosystems – and the bias is serious,”* says Professor Terry V. Callaghan CMG, Founder and Science Coordinator of INTERACT and Associate Professor Margareta Johansson, Coordinator of INTERACT.

A circumarctic distributed observing network is important for documenting and understanding arctic change. *“INTERACT brings together managers of existing research stations to improve the services and facilities needed to study arctic ecosystems and address local, national and global challenges. Collaborative long-term monitoring, experimental research and integration of indigenous and local knowledge is key to understanding changes*

*and their consequences for people living in the Arctic,” explains Morten Rasch, Chairman, INTERACT Station Manager Forum.*

International efforts are therefore needed to close the geographical knowledge gap – a gap that existed before the Ukraine conflict, but now has grown to a crevasse. *“The study shows the importance of a geographically representative network of observing sites if we want to understand current and projected changes in the Arctic. To improve the observational capacity in the Arctic, INTERACT welcomes members that fulfil three criteria: Housing facilities open for external scientists, a monitoring programme and intended long-term operation of the facility,”* states Elmer Topp-Jørgensen, INTERACT Station Manager Forum.

INTERACT is a network of friends with a globally important role: we are in the right place (but less so now with Russian stations on pause), at the right time and with the right skills to observe, understand and respond to rapid environmental changes but our recent study shows we need to restore and even extend our previous geographical coverage of the North through science diplomacy to better protect the Arctic and beyond,” elaborates Professor Terry V. Callaghan CMG, Founder and Science Coordinator of INTERACT and Associate Professor Margareta Johansson, INTERACT Coordinator.

The paper “Towards an increasingly biased view on Arctic change” published in Nature Climate Change can be accessed here: <https://www.nature.com/articles/s41558-023-01903-1> (DOI: 10.1038/s41558-023-01903-1).

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