



Editorial: Social relevance of polar research: Part 2

Monika SZKARŁAT^{1*}  and Agnieszka SKORUPA² 

¹*Institute of Political Sciences and Administration, Centre for Artificial Intelligence and Computer Modeling, Maria Curie-Skłodowska University, Głęboka 45, 20-612, Lublin, Poland*

²*Institute of Psychology, University of Silesia, Grażyńskiego 53, 40-126 Katowice, Poland*

*corresponding author: monika.szkarlat@mail.umcs.pl

Polar research has long been a focal point of scientific inquiry, primarily dominated by the natural sciences, which have extensively documented environmental changes, climate dynamics, and biodiversity shifts. However, in recent years, the growing recognition of the polar regions as complex geopolitical, socio-economic, and cultural spaces has underscored the importance of social sciences in research. Social sciences rise diversity to polar studies by incorporating multidisciplinary approaches that integrate governance, policy, and human dimensions, thus contributing to a more comprehensive understanding of these regions. The contributions in this issue of *Polish Polar Research* exemplify how social sciences enrich our understanding of transformations in both the Arctic and Antarctic, particularly in the face of geopolitical instability, socio-economic change, and evolving research cooperation.

One of the key themes explored in this issue is the increasing securitisation of scientific cooperation in the European Arctic. Szkarlat's (2025) article examines this phenomenon through the lens of the Copenhagen School's securitisation theory (Buzan *et al.* 1998; Buzan and Wæver 2003), revealing how geopolitical tensions, particularly those arising from Russia's aggression against Ukraine, have altered the perception of Arctic research from an apolitical knowledge-sharing endeavor to one intertwined with strategic interests (Dodds and Hemmings 2015; Dodds and Nuttall 2016; Young 2021). The European Union emerges as a significant securitising actor, shaping research regulations and reinforcing concerns over dual-use technologies and foreign interference (European Commission: Directorate-General for Research and Innovation 2022; OJ L 206, 11.6.2021; OJ L 338, 23.9.2021; OJ L 2023/2113, 11.10.2023; C/2024/3510; OR. En 10125/22). These findings challenge the traditional view of science diplomacy and international research collaboration as a stabilizing force and highlight the need for a balanced ap-

proach that preserves international cooperation while mitigating security risks.

Szczerbowicz's (2025) contribution further develops the discussion on Arctic political dynamics by deconstructing regional governance narratives. Using a poststructuralist approach (Derrida 1967; Foucault 1969, 1977; Der Derian and Shapiro 1989), the article analyses Arctic discourses and the shifting political core of the region, particularly in light of the fragmentation caused by Russia's exclusion from most collaborative frameworks post-2022 (Busch 2021; Paukkunen and Black 2023; Knutsen and Pettersen 2024). The study underscores how the Arctic is not a monolithic entity but a discursive space shaped by competing state interests and policy narratives (Neumann 1994; Hoogensen Gjörv and Hodgson 2019). This perspective is crucial in understanding how regional actors frame their Arctic engagements and in identifying pathways for future cooperation amid rising tensions.

Beyond geopolitics, social sciences also provide valuable insights into the socio-economic transformations taking place in the Arctic. Węśławski *et al.* (2025) examine the profound socio-economic shifts occurring on Svalbard as a response to environmental changes (Urbański and Litwicka 2022; Schlegel and Gattuso 2023; Węśławski and Urbański 2024). The decline of traditional industries such as mining and hunting has given way to scientific research and tourism as the dominant economic activities. This shift exemplifies how climate change is not only an environmental challenge but also a driver of broader societal transformations, necessitating adaptive governance frameworks that can balance economic development with sustainability (Dannevig *et al.* 2023; Hovelsrud *et al.* 2023).

The role of tourism as a socio-economic force in the Arctic is further explored in Kugiejko's (2025) study, which investigates post-pandemic tourism patterns in Longyearbyen (Kugiejko 2021; Saville 2022). The findings suggest that, following the COVID-19 pandemic, tourists have become increasingly conscious of environ-



mental sustainability and safety concerns. This shift in tourism behavior presents both opportunities and challenges for Arctic communities, which must navigate the fine line between economic reliance on tourism and the need for strict environmental protections (Gössling and Schweiggart 2022; Łuszczuk *et al.* 2022).

Finally, this issue includes a comparative perspective on regional engagement in polar research, as seen in Kökyay and Keskin's (2025) analysis of Türkiye's Antarctic policy (Official Journal of the Republic of Türkiye 1995). Although focused on the Antarctic, the study provides relevant insights into how emerging actors seek to establish scientific presence and influence in polar governance. This perspective is valuable in understanding the broader dynamics of international scientific cooperation and its intersection with geopolitical ambitions (Öztürk and Atasoy 2013; Şenel and Yavaşoğlu 2020).

The intersection of scientific research and governance frameworks is an essential element of both Arctic and Antarctic studies. Policy-oriented research within the social sciences, such as science diplomacy, knowledge transfer, and decision-making processes, has been increasingly influential in shaping the polar regions' governance. These studies provide critical insights into how scientific knowledge is integrated into national and international policy-making, highlighting the need for evidence-based strategies that enhance cooperation while addressing security concerns. As demonstrated in this issue, understanding the Arctic and Antarctic as geopolitical and socio-economic spaces is crucial for crafting sustainable and inclusive policies.

Another significant contribution of social sciences to polar research is their ability to critically assess the socio-environmental consequences of scientific activities. The concept of 'sustainable science', ensuring that scientific expeditions, fieldwork, and infrastructure development in polar regions are conducted with minimal environmental impact, is a growing field of study. Addressing these concerns is essential in light of the increasing human footprint in these regions, particularly in the context of climate change and expanding research activities.

Moreover, the human dimension of polar research extends beyond governance and science diplomacy to include the lived experiences of local communities and research personnel. Studies on stress, job satisfaction, and the impact of geopolitical uncertainties on researchers' work environments are gaining prominence. The multidisciplinary approach adopted in the articles included in this issue reflects the necessity of integrating psychological and sociological perspectives into broader discussions on polar research.

Together, these contributions highlight the indispensable role of social sciences in polar research. By incorporating multidisciplinary perspectives that span geopolitics, governance, socio-economic change, and human-environment interactions, social sciences offer a more holistic understanding of the Arctic and Antarctic. As these regions continue to face rapid transformations, it is imperative that

research frameworks embrace the diversity of disciplines to inform resilient and adaptive policies. This issue of *Polish Polar Research* stands as a testament to the critical contributions of social sciences in shaping the polar discourse, urging further interdisciplinary collaboration in addressing the regions' pressing challenges.

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