## Introduction

# Climate Change and the Arctic: Global Origins, Regional Responsibilities?

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The theme of this year's Arctic Yearbook, "Climate Change and the Arctic: Global Origins, Regional Responsibilities?", is two-dimensional: on the one hand, recognizing the global origin of climate change/global warming, and on the other, identifying the Arctic region as a linchpin and laboratory of climate change, and discussing and brainstorming possible responsibilities, and even ideas for problem-solving, from Arctic and regional actors. We have been successful in inviting and challenging analysis on the interrelations between the two scales (global and regional), and from the point of view of different activities on the scales (oil and gas development, aquaculture, tourism, science, mitigation), as well as from the aspects of relevant actors (Arctic Council) and groups of actors (Indigenous, gender), and their interests - as the rich lineup of authors and articles clearly shows.

# Climate change in the Arctic

The Arctic region is becoming increasingly integrated into world affairs while the region is simultaneously experiencing the growing impacts of climate change and environmental pollution, two of the world's major 'wicked' problems. Rapidly advancing climate change, and in particular warming of, the Arctic region was largely discussed after the launch of the Arctic Climate Impact Assessment Report in 2004 (ACIA, 2004), although scientifically at least, and even in some political circles, the phenomenon has been known for seventy years or so, as "climate change became a U.S. national security concern even before the Cold War became hot" (Doel, 2009: 17). Now the IPCC reports that the polar regions are experiencing climate change at twice the rate as the rest of the globe. In the summer of 2020 Arctic sea ice extent was reported fell to the second-lowest annual minimum on record.

Indeed, the Arctic is considered and has been redefined, at least since 2004, as a linchpin of global warming, like a canary in coal mine, as well as a laboratory or workshop for climate change research supported by TEK (Traditional Ecological Knowledge) and Indigenous knowledge. Furthermore, climate change, in particular the Arctic as a victim of global warming, has become one of the major ways of Arctic perception. This is partly true and partly paradoxical, as small island states in the Indian Ocean and the Pacific, and low-level coastal areas of developing countries are the first real victims of climate change, simply due to the global nature of the climate warming.

Actors seeking to develop their region, as well as actors from outside the region, however, do not necessarily align with a current geopolitical narrative that presents the region as a pristine and fragile environment in need of heightened protection and preservation. This lack of consensus is problematic in the face of climate change, pollution (in particular long-range air and water pollution) and loss of biodiversity, all wicked problems for the Arctic region, and consequently for the Northern Hemisphere, if not the entire globe.

#### Paradox/ambivalence vis-à-vis a focus on science

As if this would not be enough, there is ambivalence, "whenever a balance is sought between environmental protection and climate change mitigation vis-à-vis an increase of (new) economic activities for Arctic (regional) development" (Heininen et al, 2019: 253). This is largely due to 'political inability', when the Arctic states are hesitating to implement climate change mitigation, or putting it bluntly, to make the hard decisions. But we must also reflect on why these decisions are so hard.

Following from this, there is a paradox in Arctic development, with environmental protection and climate change mitigation sought alongside an increase in economic activities by the Arctic states, as the sovereign actors of the region, and with many of the Arctic Council observer states identifying themselves as Arctic stakeholders. Neither are ready to take into account, study and further develop learned-lessons about the value of mutually-beneficial common interests of Arctic geopolitics/governance as a foundation for stability and peaceful development, as well as for international efforts to tackle climate change.

At the same time - due to the rapidly advance climate change, growing pollution in Arctic waters (including micro-plastics in the Arctic Ocean) and the ambivalence (or paradox) between environmental protection and economic activities - Arctic stakeholders (Arctic states, Permanent Participants, Observer states) "are dependent for problem-solving on scientific research, as well as international cooperation in science" (Heininen et al., 2019: 253).

In addition of this wicked problem and the related ambivalence, in 2020 the world saw the coronavirus becoming a new kind of non-military threat and the COVID-19 pandemic an invisible enemy threatening all societies worldwide. The pandemic became a global crisis, forcing public authorities to make exceptional decisions, when emergency laws were passed, many restrictions imposed on daily life, and borders were closed, opened and closed again. In many cases, decisions were implemented very quickly, without real discussion and political debate, even though they often affected and possibly endangered basic rights of citizens. Consequently, the economic well-being of companies and individuals were put in danger, and for many collapsed.

On the other hand, the pandemic saved energy, resources and time as most adults started to work, and students to study, virtually at home, as well as conferences, meetings and lectures went online.

Most developed countries were able to demonstrate their flexibility, resilience and ability to operate during the pandemic, thanks to high-technology, good infrastructure, and advanced knowledge in distance learning, though many people have started to experience digital fatigue. Furthermore, there is less air pollution, urban car traffic has been diverted in favor of more space for pedestrians, bikes and cafes. Significant new investments and "Green (New) Deal" policies were pledged for energy efficiency and saving, alternative energy sources, and CO<sup>2</sup> neutrality.

Finally, globally COVID-19 brought new premises and forces us to consider globalization's dark side and the fragile nature of our modern societies. It awakened us to the need to bring up new premises of security including non-military threats, such as pandemics, environmental degradation, climate change - more importantly to apply the concept of 'comprehensive security' when facing them, and "searching for a paradigm shift" (Heininen & Exner-Pirot, 2019). On the other hand, it also supports the importance of scientific research and its applications, as well as digitalization and distance-learning, when handling and solving global crises and wicked problems.

When we decided (in December 2019) this year's theme, including its two-dimensional nature, we did not know what was coming. There is, however, a connection, though not necessarily obvious, between the COVID-19 pandemic - in particular how it is interpreted and treated as a global shock, preferring a 'social order' and leaning on authoritarian solutions - and the Arctic region, which has moved successfully from military tension to high geopolitical stability and constructive international cooperation, in particular functional cooperation on environmental protection and climate change.

Like climate change, pollution, and also economic development and globalization, the pandemic has demonstrated how the Arctic as a region cannot insulate itself from phenomena arising from the South.

# From theory into action and problem-solving

We face a post-pandemic question and a potential lesson to learn. The globalized Arctic – an exceptional political space and unique regime – has the potential to nudge a shifting world order toward mutually beneficial cooperation and comprehensive security. As the current Arctic regime does not result from the Hobbesian zero-sum approach but derives from the application of a critical, constructivist and cooperative approach to governance, geopolitics and security, it can help to ameliorate currently turbulent and uncertain world politics. Arctic cooperation is mutually beneficial and inclusive, as all relevant actors – states, nations, Indigenous peoples, regions, NGOs, civil societies, individuals – are involved. This is essential, since ultimately power and responsibility are borne by people and civil societies, and it is they who benefit the most having a paradigm shift on security (e.g. Heininen & Exner-Pirot, 2019).

We need not be fatalistic, as an "Arctic paradox" is not inevitable. The rapid warming of the Arctic climate could be interpreted as the last warning revealed by western science and traditional/Indigenous knowledge, as well as an opportunity to find solutions by policy-shaping and leaning on science. Much depends on the criteria by which the Arctic states make their decisions: to believe they can (re)construct, and already have reconstructed, their reality of post-Cold War Arctic geopolitics by following their commitments on climate change mitigation. Finally, considering these as global, ethical questions the global Arctic offers a common ground for lessons-to-learn, as well as for brainstorming, as this Arctic Yearbook aims to do.

## About the Arctic Yearbook & the 2020 volume

As an international, interdisciplinary, online journal with open access, the Arctic Yearbook provides accessible, reliable information in a sea of pay-walled articles and fake news, and a high quality forum for ideas and research about Arctic politics, governance and development, established at a time when open access was still a relatively new idea. The Arctic Yearbook's application, peer review, and copy-edit processes are truly author centred. Its unintended but highly welcomed outcome includes being a go-to option for post-docs, PhD candidates and other early career researchers. Many of them and other researchers appreciate the Yearbook due to its accommodating style, open access nature, fast peer-review process, and visibility on social media.

Due to its open access nature, the more than 170 scholarly peer-reviewed articles and 136 briefing notes and commentaries (in 2012-2019) have shared Arctic social science research far beyond the usual halls of academia, receiving tens of thousands of reads. This makes the Arctic Yearbook a leading international Arctic peer-reviewed journal in a few fields including regional IR (international relations), Arctic shipping, the Arctic Council, and Arctic state policies. An active social media presence, and more than 4000 followers, has allowed the Arctic Yearbook to further disseminate Arctic research to new audiences.

The Arctic Yearbook has run on volunteer efforts since its initiation. In addition, thanks to Arctic Portal's invaluable role in hosting the Arctic Yearbook website, only some small financial contributions have been needed to assist with launch events, cover design and printing. Instead, the Yearbook's application is built on several strengths, as prerequisites for success: expertise, networking based on individuals, willingness & capabilities, and encouragement & innovations. All this has allowed the Yearbook to remain independent, quick and flexible, and focused on publishing new research findings rather than being occupied with seeking funding.

By this theme, the 2020 volume seeks to explore, analyze, critique, and further inform narratives about the Arctic, roles and responsibilities for adaptation and mitigation, and the potential for sustainable development in the midst of global climate change and pollution. What are the main risks and challenges of climate change in the Arctic? How are actors responding to climate change in the Arctic and who are the primary players? Whose responsibility is it to respond to this global issue? How do we overcome the above-mentioned paradox? What policies can or have already been put in place to support regional and local development in a time of global change? What policy developments can, should, or have been made?

This volume is divided into four sections. The first examines geopolitics and economics in a warming Arctic. As always, our authors provide nuance to what are often superficial and oft-repeated narratives about the region's politics and economies. Climate change looms large, but there is value and necessity in analyzing how and where it is affecting states, communities, security, governance and development – in practice.

The second section provides an intersectional lens on issues of climate change and more, and tests our assumptions about how policies, research and adaptations to climate change should be developed and implemented. These are strengthened, inevitably, by ensuring space for and respect of diverse voices and perspectives.

The third section assesses and critiques some of the policies that are meant to address the wicked problem of climate change. This is a field that must be ambitious and innovative, for addressing

the challenges of Arctic climate change require a disruption to the status quo. Do we have the governance tools to tackle these problems? Can these policies create winners without concomitantly having losers? Is there an Arctic future that we can be optimistic about, rather than just counting the losses? These authors tackle the challenge of identifying solutions rather than identifying problems.

Our final section examines the role that the Arctic Council might play – but has not yet fulfilled – in addressing climate change. The Arctic Council was not designed to develop or implement climate change policy, and yet to many stakeholders and observers that is what it must do, and only it can do. Our authors provide insight into how its role has evolved and how it might progress in the future. The question can be rightly asked: is the Arctic Council up to the task, or is a new organization needed to address the challenges of climate warming for the region?

Lastly, our cover is meant to provoke thought on the nature of the Arctic and its relationship to the outside world. Is it a mere curiosity, or a victim to be saved? Is the Arctic an object, or is it an agent of its own fate? Is it a collection of states, as represented by flags, or a homeland of diverse nations with sometimes competing interests and values? Can it be allowed to change and evolve, or must it remain the land of explorer's diaries and exoticisms? Our authors explore many of these questions, implicitly and explicitly, as we move beyond simple global-regional dichotomies.

All in all, the Arctic Yearbook consistently provides high quality, peer-reviewed articles from diverse researchers of Arctic social science and the humanities. It does so through open access, because it is a labour of love for the region, its people, and its decision makers. The Yearbook is an idea, initiative and institution for use by Arctic communities, as well as a perfect platform for the current state of the world that merits a global audience.

We welcome you to have a look at the rich contents of the 2020 Yearbook, and look forward to hearing from you and your comments, possible ideas and proposals concerning the Arctic Yearbook, as well as your contributions for future volumes.

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