



HARVARD Kennedy School

BELFER CENTER

for Science and International Affairs

Arctic Initiative

2023–2024 Year in Review

Arctic Initiative

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The Arctic Initiative would like to thank all of our partners and advisors who make our work possible. Special thanks go to the TED Audacious Project, the Gordon and Betty Moore Foundation, and Schmidt Futures Initiative of the Eric and Wendy Schmidt Philanthropies for their crucial support of our work during academic year 2023-2024. We also thank our International Advisory Board Members for their skillful guidance: Tarja Halonen, Riikka Karppinen, Sara Olsvig, Evon Peter, Gunn-Britt Retter, and Alice Rogoff.

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MARGARET WILLIAMS



Welcome to the
Arctic Initiative

Top: Wildflowers bloom along the Chukchi Sea coast.

Dear colleagues,

We believe that the Arctic is a special place that requires greater attention in national and international policymaking, and if you are reading this, chances are that you are as passionate about the top of the world as we are. With this in mind, we are pleased to share the highlights from another busy year at the Arctic Initiative.

As part of the Belfer Center for Science and International Affairs, the Initiative is dedicated to policy-relevant research. For us, this means tapping into the diverse academic expertise of our faculty, fellows, and associates and combining this with pragmatic, solutions-oriented activities that contribute real-world impact. These include:

- Fostering resilient Arctic communities;
- Addressing the regional and global impacts of permafrost thaw;
- Advancing sustainable ocean management;
- Strengthening regional governance in a changing geopolitical environment; and
- Helping to train the next generation of Arctic Leaders.

As the following pages will attest, our team has been busy convening discussions with key decisionmakers, deepening our understanding of critical issues, lifting up new and emerging leaders, and supporting thoughtful and informed policies. We are incredibly proud of all the people affiliated with this program and the passion and enthusiasm that they bring to this work.

Of course, we recognize that we can only be successful in our efforts if we are working closely with a diverse range of partners. In 2023-2024, we collaborated with over 28 organizations around the world, with particular priority placed on working with institutions based in the Arctic and those that represent Arctic Indigenous Peoples.

The work that we have done in the past year would not have been possible without these partnerships, and we want to take this opportunity to acknowledge and thank these amazing people and organizations. Nor would our work have been possible without the support of our sponsors, to whom we are deeply grateful.

John P. Holdren
Co-Chair

Henry Lee
Co-Chair

Jennifer Spence
Director

Our Mission

The Arctic has become a crucible in which the fast-warming climate is generating cascading impacts both within and beyond the region. It is compounding economic and social challenges facing the region’s economies and Indigenous and local cultures. And it is complicating governance within and among Arctic nations, as well as relations among Arctic-interested countries more widely.

Launched in 2017, the Belfer Center’s Arctic Initiative seeks to contribute to the interdisciplinary, multidimensional, collaborative analysis and responsive actions that this complex of problems and opportunities requires. Our team of faculty, fellows, and staff works closely with officials and experts across the circumpolar region to advance understanding and action in five focus areas: enhancing community resilience in a changing Arctic, developing responses to the local and global impacts of permafrost thaw, addressing issues in Arctic Ocean management, charting a course for future Arctic governance, and training the next generation of Arctic leaders.



Fran Ulmer moderated a discussion with Raina Thiele, John Holdren, Jacqueline Schaeffer, and David Balton (left to right) on the importance of crafting durable climate policies.

OUR TOOLBOX

Our work on these focuses has multiple, interlocking facets. We:

- **Convene diverse experts, knowledge-holders, and decisionmakers** to deepen our understanding of the opportunities and challenges facing the Arctic and the actions needed to respond
- **Identify and help close gaps** in scientific, technical, and socioeconomic knowledge relevant to developing and implementing effective policies
- **Make accessible and elevate the best available insights** from cutting-edge scientific research, Indigenous knowledge, and policy analysis about the opportunities and challenges shaping the Arctic and potential solutions for addressing them
- **Communicate those insights to inform decisionmakers** in a position to act on them through workshops, convenings, and publications
- **Contribute to training an expanding community** of interdisciplinary, solutions-oriented Arctic leaders
- **Build meaningful collaborations** among Arctic Indigenous communities, researchers, and policymakers

2023-2024 Highlights

15
media
features of
Initiative
experts



Jennifer
Spence
named
Project
Director

24
publications, including
10 academic articles, policy
briefs, white papers,
and commentaries

50+
events, including
seminars, workshops,
and conference panels

1,000+
virtual event
attendees



Sara Olsvig
joins
advisory
board

28
collaborations
with external partners



During Harvard Climate Action Week in June 2024, John Holdren (second from right) explained why everyone should care about Arctic permafrost emissions: “It’s the emissions from society’s activities in the temperate regions, above all, that are driving global climate change. Climate change is happening 3-4 times faster in the Arctic than the world average. If the world doesn’t slow its emissions at a greater rate than is happening today, all that is going to get worse.”

Responding to the Local, Regional, and Global Impacts of Permafrost Thaw

Across the 5.5 million square miles of Arctic lands, warming temperatures, shrinking glaciers and sea ice, and thawing permafrost are having devastating consequences for Arctic residents and growing impacts globally.

Our team continues to advise local and regional stakeholders and policymakers on local permafrost impacts and adaptation and response planning, while also informing international and national publics and policymakers about the potential relevance of permafrost emissions to the pace of global change and the societal emissions consistent with internationally agreed temperature targets.



A permafrost thaw slump threatens a highway near Whitehorse, Yukon.

We have developed and disseminated policy briefs on these topics that translate our research into actionable insights and have engaged stakeholders and policymakers in a wide variety of events, workshops, and high-level meetings.

APPLYING RESEARCH TO COMPLEX PROBLEMS FACING COMMUNITIES

Our team has continued its work to leverage research to contribute to community resilience through a June workshop in partnership with the Arctic Athabaskan Council (AAC) in advance of the International Conference on Permafrost (ICOP). The session brought together ICOP participants who have experience working with communities to create and integrate permafrost knowledge and are committed to building bridges, filling gaps, and finding solutions to translate this knowledge into action. Several representatives from nearby Indigenous communities concerned about permafrost thaw also participated to share their experiences and contribute to the discussions.

A forthcoming workshop report will capture key insights from the discussion and shape future community workshops with the Arctic Athabaskan Council – in particular, a workshop of Alaskan and Canadian Indigenous communities to exchange knowledge and identify concrete actions that best serve communities.

NATIONAL AND INTERNATIONAL IMPLICATIONS

On the U.S. front, members of our team elevated the topic of permafrost thaw risks at the Global Crisis and Resilience Forum in May. The Forum, organized by former Department of Homeland Security Juliette Kayyem, brought together over fifty leading practitioners and thinkers in resilience and crisis management from all levels of government, NGOs, and the private sector to discuss imminent risks facing U.S. communities, including climate change, pandemics, and human migration. John Holdren led a session focused on our work with Permafrost Pathways, a multiyear collaboration with Woodwell Climate Research Center that brings together leading experts in climate science, policy action, and environmental justice to inform and develop adaptation and mitigation strategies to address permafrost thaw.

Internationally, our team worked with U.S. and Canadian officials to enhance coordination and elevate permafrost thaw as a critical issue on the Arctic agenda. In November, Permafrost Pathways and PermafrostNET co-hosted a workshop following the Canadian Science Policy Conference, which focused on strengthening Canada’s leadership in permafrost research. As a result of these efforts, we helped facilitate a joint statement from the U.S. Arctic Research Commission and Polar Knowledge Canada, recognizing permafrost research as a key area for future collaboration.

Canada and United States will work together to advance Arctic research and knowledge.

“As we look ahead to the Canadian (2029-31) and U.S. (2031-33) chairships of the Arctic Council, and the International Polar Year (2032-33), we have opportunities to build a more effective Arctic research collaboration, leveraging the strengths of each country.”

—Polar Knowledge Canada and United States Arctic Research Commission Meeting of the Boards at the Canadian High Arctic Research Station



Left to right: Wilson Center’s Rebecca Pincus, Arctic Initiative Co-Chair John Holdren, Woodwell Climate Research Center’s Susan Natali, and Sandia National Laboratory’s Benjamin Cook discussed the global implications of Arctic methane on a panel at Arctic Circle Assembly 2023 in Reykjavík, Iceland.



Case study map of the “What It Means to Be Resilient: Lessons from the Arctic” project.

Collaborating with Partners to Foster Resilient Arctic Communities and Ecosystems

In the face of extreme conditions and dramatic climatic, environmental, economic, political, social, and technological changes, some Arctic communities are struggling, while others thrive. Our research on resilience examines the myriad ways Arctic communities and ecosystems respond to stressors. By advancing understanding of the indicators of resilience, we aim to help more communities adapt and emerge stronger and better prepared for the future.

MAPPING AND MEASURING RESILIENCE

This year, we deepened a partnership with Nord University, the World Reindeer Herders Association, and the UArctic Thematic Network on Local-Scale Planning, Climate Change and Resilience, which seeks to identify and document case studies of resilience across the Arctic. The project, “What It Means to Be Resilient: Lessons from the Arctic,” aims to explore the unique conditions and characteristics of resilience in the Arctic, to continue to build a community of researchers interested in Arctic resilience, and to foster a

deeper understanding of resilience as a dynamic, multifaceted phenomenon that is crucial for the sustainability of communities and ecosystems in the face of ongoing and future challenges.

To date, the project has included workshops at Arctic Circle, Arctic Frontiers, Arctic Encounter, and Arctic Congress. Over the coming year, in-depth analyses of the selected case studies will be profiled through a virtual storyboard and edited book, among other activities.



At Arctic Congress 2024, participants - including Andrey Mineev (pictured) - in a roundtable discussion assessed indicators and case studies identified at previous workshops organized by the Arctic Initiative and Nord University.

“GETTING OUR HANDS DIRTY”

At the Arctic Initiative, we conduct research that provides tangible benefits for Arctic residents and ecosystems.

This year, our faculty affiliate Dr. Stuart Harris and his team at Massachusetts General Hospital’s Division of Space, Ecological, Arctic, and Resource Limited Medicine continued to elevate awareness of the interdependence of human, animal, and environmental health in the Arctic, while providing direct medical support to climate research teams and improving healthcare delivery through Alaska Native health partnerships. Harris was recognized as a finalist for the 2023 Frederik Paulsen Arctic Academic Action Award at the Arctic Circle Assembly for his work on health monitoring in Alaska’s Northwest Arctic Borough to quantify and qualify climate impacts on human health.

“When COVID was first on the scene, how did we know who had it and how did we quantify it? Emergency medicine and ER visits...can be a sensing mechanism for how climate change is hurting people right now.”

—Stuart Harris, from “Temperature is a Vital Sign.”

Postdoctoral Fellow Nadezhda Filimonova led the Initiative’s research and outreach on improving solid waste management in the Arctic, where climate change is exacerbating already challenging conditions for safe waste disposal, with potentially severe consequences for human health and environmental quality. In collaboration with the Arctic Mayors’ Forum, Filimonova facilitated an April seminar with sanitation practitioners and researchers to share best practices and innovative approaches to safe, sustainable waste disposal in Arctic cities.



Stuart Harris led an Arctic Circle Assembly session, co-organized with the University of Oulu and UArctic, on how climate change is undermining the nexus of human, animal, and environmental health in the Arctic.



Nadezhda Filimonova’s Arctic Encounter Symposium panel on waste management challenges in rural Arctic communities was covered by Alaska news media.



Nadezhda Filimonova conducts a field visit to the Central Waste Transfer Station in Anchorage, Alaska, on April 13, 2024.



ELIZABETH HANLON

Officials, experts, and knowledge-holders gathered at Harvard Kennedy School in May 2024 for a workshop on advancing the U.S. National Strategy for the Arctic Region.

Supporting International and National Policymakers on Governance in Stormy Times

As the war in Ukraine grinds on and tensions remain high between Russia and the other seven Arctic nations, our team continues to foster informed discussions on the future of Arctic governance and scientific cooperation and to provide policymakers with actionable insights and recommendations.

REVITALIZING THE ARCTIC COUNCIL

At the international level, under the leadership of Jennifer Spence and Fran Ulmer, we engaged in strategic dialogues on revitalizing this crucial body with officials from the United States, Canada, Iceland, Denmark, Norway, and Finland, as well as representatives from multilateral institutions, including the Arctic Council itself, the International Arctic Science Committee, and others.

In September 2023, with the Fridtjof Nansen Institute and the Norwegian Institute of International Affairs (NUPI), we hosted a convening on Arctic Council operations and governance

that brought together representatives from the Arctic Council, civil society, academia, Indigenous organizations, and national governments. The workshop featured insights from key Arctic Council leaders and focused on climate science and emergency preparedness. A subsequent workshop report outlined practical advice for current and future Arctic Council Chairships and the U.S. State Department. This report was delivered to the Norwegian Arctic Council Chairship, U.S. senior officials, and workshop participants.

Many of our recommendations on this topic have since been implemented, including resuming virtual working group meetings to enhance Permanent Participant involvement and allow some projects at the working level to restart. We have also provided briefings to the Kingdom of Denmark and Greenland as they prepare their priorities for their incoming Chairship of the Arctic Council in 2025.

The September 2023 workshop led to the release of two additional publications: “The Future of Arctic Council Innovation: Charting a Course for Working-Level Cooperation,” which provided a public-facing summary of the workshop discussions and recommendations; and “Arctic Climate Science: A Way Forward for Cooperation through the Arctic Council and Beyond,” which was co-authored by members of our team and workshop participants from NUPI and UiT The Arctic University of Norway. These reports provided recommendations for enhancing climate science cooperation in the Arctic and have been well-received by the current Norwegian Chairship, the incoming Danish Chairship, Permanent Participants, and the U.S. and Canadian Ministries of Foreign Affairs.

ADVANCING THE U.S. NATIONAL STRATEGY FOR THE ARCTIC REGION

Domestically, the Arctic Initiative worked with the White House Office of Science and Technology Policy and the Department of Interior to co-host a May 2024 workshop at Harvard Kennedy School that brought together officials, experts, and knowledge-holders involved in advancing the National Strategy for the Arctic Region (NSAR) 2022. Participants took stock of the tools and mechanisms used to operationalize the NSAR, explored opportunities to strengthen connections between activities, and discussed strategies to sustain efforts to advance the NSAR moving forward.



Jennifer Spence and Andreas Østhagen co-moderated an Arctic Congress panel on the Arctic's shifting geopolitical and governance landscape. Rikey Hauksdottir presented her research on the so-called “no-limits” partnership between China and Russia, whose governments have grown closer due to Russia’s current estrangement from the West.



TESSA VAPVARES



Margaret Williams (right) discussed approaches to conserving Arctic marine biodiversity at a roundtable hosted by the Prince Albert II of Monaco Foundation at Monaco Ocean Week 2024. Also pictured (left to right): Romain Ottavi, Johanna Ikävalko and Ingeborg Relph.

Mitigating Shipping Risks to Communities and Ecosystems in the Bering Strait

Unprecedented warming has dramatically altered sea ice extent throughout the Bering Strait region, opening up new opportunities for maritime activities. Increased shipping in the Bering Strait, combined with current geopolitical tensions and changing sea ice conditions, has raised risks to communities and sensitive marine habitats from vessel collisions and spills. The Arctic Initiative has been a long-time leader in projects related to marine conservation and resilience. Despite geopolitical challenges, we have maintained communication and identified channels for cooperation on regional ecosystems.

FINDING ALTERNATIVE ROUTES

Drawing on our team's expertise in science diplomacy and Arctic governance, over the past year we continued to convene conversations on how to mitigate shipping risks in the Bering Strait without Russian engagement in the near term.

In January 2024, Senior Fellow Margaret Williams convened a workshop during the Alaska Marine Science Symposium entitled, "Transboundary Collaboration in the Arctic." Representatives from academia, U.S. agencies, NGOs, and consulting firms - all with extensive experience in transboundary research with Russia in the Bering and Chukchi seas - shared updates on the status of projects, challenges resulting from interrupted communication with Russian colleagues, and ideas on how to move forward. The workshop fostered valuable dialogue on sustaining critical research efforts and finding solutions to overcome the barriers posed by disrupted communication.

In the spring, the Arctic Initiative offered a study group for Harvard Kennedy School students to engage participants in debate about whether and how science and conservation could resume between the West and Russia during wartime. Twelve graduate students participated in the study group, including two National Security Fellows

(one from the U.S. Coast Guard and another from the U.S. Army) who focused on the Bering Strait, recommending that the passage be designated as a strategic resource as well as a demilitarized zone. The group's insights underscored the need for innovative approaches to managing transboundary resources and maintaining peaceful collaboration amidst geopolitical tensions.

PICKING UP THE PIECES

Expanding on our work within this region, we are also working to preserve valuable cross-Strait relationships and to ensure that, when tensions between Russia and the United States subside, policymakers on both sides are equipped with options for resuming cooperation on disaster preparedness and response.

Members of our team have maintained dialogues with scientists who share a desire to continue making progress on common research agendas. In particular, Williams participated in a series of meetings focused on maintaining ties between Russian researchers and their Western counterparts. She conducted one-on-one conversations with approximately 30 Russian and American scientists and conservationists, who



A spring 2024 study group, led by Margaret Williams, evaluated the costs and benefits of renewing cooperation with Russia on science and conservation issues following the 2022 invasion of Ukraine, in the process teaching students about key governance structures in the region.

consistently emphasized the necessity of some level of continued cooperation to safeguard shared resources and maintain valuable relationships.

This fall, the Arctic Initiative, with support from the Trust for Mutual Understanding, the Eurasia Conservation Fund, and the Gordon and Betty Moore Foundation, will convene leaders in Arctic conservation to discuss pathways forward, with an initial focus on the Bering Strait region. Our goal is to initiate effective interim cooperation until more ambitious, on-site work is possible.

Building on these efforts to foster collaboration, this year, our team published several papers on the consequences of geopolitical tensions on scientific collaboration and biodiversity conservation. Margaret Williams, Nadezhda Filimonova, Jennifer Spence, and Fran Ulmer co-authored a case study on Bering Strait biodiversity in a special journal issue by the Tufts Fletcher Forum. Williams also published "What Does Russia's War in Ukraine Mean for Global Biodiversity Conservation Efforts?" and "The Environmental Impacts of the War in Ukraine in the Arctic." These works emphasize the critical need for adaptive strategies to safeguard the Arctic environment.



At-sea field work in Alaska: Associate Douglas Causey (left), pictured here with U.S. Fish and Wildlife Service's David Martindell and Jeffrey Williams, studies ecological change in marine bird populations in the Aleutian Islands.

Training the Next Generation of Arctic Leaders

We are committed to building capacity among younger generations, uplifting youth voices, and fostering discussions with them on developing solutions to rapid environmental and social change in the Arctic. Students are deeply involved in the operation and success of our research efforts, and students served as authors on multiple Initiative publications.

Over the last academic year, we engaged with students at Harvard Kennedy School and other universities through seminars, a study group, the Arctic course, a two-part Indigenous youth leadership workshop, participation in the ARCADE program for young Arctic leaders, and the perennially successful annual Innovation Lab at the Arctic Circle Assembly.

10

student-facing events

11

student publications

18

Indigenous youth leadership mentees

28

Arctic course graduates

6

research assistants



“Halla Logadóttir’s class was perhaps my favorite at Harvard. She made me a better communicator, being one of those unique teachers able to simultaneously convey technical expertise, policy experience, and deep humanity.”

- Stirling Haig MPP 2024

Left: Halla Hrund Logadóttir and Henry Lee shared insights with students ahead of COP28 on how some Arctic nations are pioneering the green movement.



Research assistant Stirling Haig (right) presented his project on offshore wind potential in the Arctic at Arctic Circle Assembly in Reykjavik, the culmination of his participation in the year-long ARCADE leadership program.



Indigenous youth from Finland, Sweden, Norway, Russia, Canada, Alaska, and Mongolia received climate leadership training during a workshop organized by the Arctic Initiative, the International Centre for Reindeer Husbandry, and Woodwell Climate Research Center. The first session was held at Arendalsuka in Norway, and the second at Harvard Kennedy School.

Our Team

Our interdisciplinary team pulls together expertise in political science, environmental science, medicine, economics, and more. Visit our website for full profiles.

Leadership



John P. Holdren
Co-Chair, Arctic Initiative;
Co-Director, Belfer Center's Science,
Technology, and Public Policy Program;
Teresa and John Heinz Research
Professor of Environmental Policy,
Harvard Kennedy School



Henry Lee
Co-Chair, Arctic Initiative;
Director, Belfer Center's Environment
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Senior Lecturer in Public Policy,
Harvard Kennedy School



Jennifer Spence
Director, Arctic Initiative;
Adjunct Professor,
Carleton University

Fellows, Associates, and Affiliates



Luke Apisa, MD
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Postdoctoral Research Fellow,
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Gregory Harris
Affiliate, Arctic Initiative;
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Harvard Kennedy School



N. Stuart Harris, MD
Faculty Affiliate, Arctic Initiative;
Chief, Division of Space, Ecological,
Arctic, and Resource-limited Medicine,
Massachusetts General Hospital



Guðbjörg Ríkey Th. Hauksdóttir
Predoctoral Research Fellow,
Arctic Initiative



L. Suzanne Leslie, MD
Affiliate, Arctic Initiative;
Emergency Medicine Physician,
Massachusetts General Hospital



Halla Hrund Logadóttir
Founder and Affiliate, Arctic
Initiative; Adjunct Lecturer, Public
Policy, Harvard Kennedy School



Andreas Østhagen
Affiliate, Arctic Initiative;
Senior Researcher,
Fridtjof Nansen Institute



Margaret Williams
Senior Fellow, Arctic Initiative;
former Managing Director, Arctic
Field Program, World Wildlife Fund



Fran Ulmer
Associate, Arctic Initiative;
former Chair, U.S. Arctic Research
Commission; former Lieutenant
Governor of Alaska

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Policy Program



Tessa Varvares
Senior Program Coordinator,
Arctic Initiative

Right: Arctic Initiative board members Gunn-Britt Retter and Taa'ajj (Evon) Peter, along with Todd Mitchell of the Swinomish Environmental Department, discussed Indigenous climate leadership at Harvard Climate Action Week in June.



International Advisory Board

Composed of leading Arctic scholars and policymakers, our International Advisory Board members help grow our local and global networks, advise on trends in the Arctic, provide strategic guidance, and engage in priority projects across our research areas. We thank our advisors for their time, support, and wisdom:

Tarja Halonen • Riikka Karppinen • Sara Olsvig • Taa'ajj (Evon) Peter • Gunn-Britt Retter • Alice Rogoff

Publications

Veronica Padula, Anne Beaudreau, Douglas Causey, et al. “Including Local Voices in Marine Debris Conversations to Advance Environmental Justice for Island and Coastal Communities.” *Facets Journal*. 9/2023.

Maria Kobzeva, Andrey Todorov. “Can China Change the Arctic Regime?” *Polar Record*. 10/2023.

Sarah Dewey, Sarah Mackie. “Managing Plastic Pollution in the Arctic Ocean: An Integrated Quantitative Flux Estimate and Policy Study.” *Polar Record*. 11/2023.

Jennifer Spence, Edward Alexander, Rolf Rodven, Sara Harriger. “What Makes the Arctic and Its Governance Exceptional?” *Arctic Yearbook*. 11/2023.

Janet King, Jennifer Spence, et al. “Advancing Canada’s Role as a Leader in Permafrost Knowledge and Policy Workshop Report.” 12/ 2023.

Brendan Rogers, John Holdren, Sue Natali, et al. “Permafrost Pathways: Connecting Science, People, and Policy to Advance Understanding of the Local to Global Impacts of Permafrost Thaw and to Develop Just and Equitable Responses.” Poster at the AGU Fall Meeting. 12/2023.

John Holdren, Dimitri Kusnezov, Cass Sunstein. “Report on the DHS S&T Harvard Climate Workshop: Opportunities for Improved Prevention and Response in the U.S. Arctic and Alaska.” Department of Homeland Security Science and Technology Directorate. 12/2023.

Linda Lyberth Kristiansen. “Decolonizing Greenland’s Education System.” Belfer Center for Science and International Affairs. 12/2023.

Gregory Harris. “Iceland’s ‘Silicon Valley of Cod’ Holds Secrets for New England’s Fishing Industry.” *Boston Globe Magazine*. 2/2024.

Jennifer Spence. “Russia Suspends Funding for the Arctic Council: Wake Up Call NOT Death Knell.” *High North News*. Feb. 2024.

Elizabeth Hanlon. “Wins and Losses for the Arctic at COP28.” Belfer Center for Science and International Affairs. Feb. 2024.

Jennifer Spence, Hannah Chenok. “The Future of Arctic Council Innovation: Charting a Course for Working-Level Cooperation.” Belfer Center for Science and International Affairs. 2/2024.

Margaret Williams, Nadezhda Filimonova, Jennifer Spence, Fran Ulmer. “Mapping a Path Forward for Arctic Cooperation with Russia: A Biodiversity Case Study.” *The Fletcher Forum of World Affairs*. Winter 2024.

Viktoria Waldenfels, Margaret Williams. “The Environmental Impacts of the War in Ukraine in the Arctic.” Belfer Center for Science and International Affairs. 3/2024.

Margaret Williams. “What Does Russia’s War in Ukraine Mean for Global Biodiversity Conservation Efforts?” Ukraine War Environmental Consequences Work Group. 3/2024.

Helen Cashman. “Airships Offer a Green Alternative to Canada’s Melting Ice Roads.” Belfer Center for Science and International Affairs. 3/2024.

Hannah Chenok. “It’s Greenland’s Turn to Lead the Arctic Council.” *High North News*. 5/2024.

Viktoria Waldenfels. “Current and Future Arctic Cooperation: Where to Next?” Belfer Center for Science and International Affairs. 5/2024.

Kristín Ingvarsdóttir, Guðbjörg Ríkey Th. Hauksdóttir. “Science Diplomacy for Stronger Bilateral Relations? The Role of Arctic Science in Iceland’s Relations with Japan and China.” *The Polar Journal*. 5/2024.

Elizabeth Hanlon. “Talking Trash: Experts Share Challenges, Best Practices for Waste Management in Arctic Cities.” Belfer Center for Science and International Affairs. 5/2024.

Nadezhda Filimonova. “Constructing Climate Change: Exploring How Cities Frame Climate Change in the Arctic.” *Journal of Urban Affairs*. 5/2024.

Elizabeth Hanlon and Tessa Varvares. “What Do Africa and the Arctic Have in Common? A Lot, It Turns Out.” Belfer Center for Science and International Affairs. 6/2024.

Stuart Harris. “How Do Wildfires Affect Health?” Mass General Brigham. 6/2024.

Margaret Williams. “Hot Topics in the Far North: Permafrost Thaw and Wildfires.” Belfer Center for Science and International Affairs. 8/2024.

Events

“Exploring Arctic Sustainability: Enhancing Resilience, Addressing Land Degradation and Permafrost Thaw through Indigenous Youth Empowerment.” 8/2023. Arendalsuka. Brittany Janis.

“Arctic Pandemics Special Issue Journal Launch.” 9/2023. Online. Jennifer Spence.

“The Future of Arctic Council Innovation.” 9/2023. Harvard Kennedy School.

“Arctic Governance and Cooperation Through Conflict.” 9/2023. Harvard Kennedy School. Jennifer Spence, Fran Ulmer.

“Rights, Resilience, and Community-Led Adaptation Workshop.” 9/2023. Anchorage, AK.

“Temperature Is a Vital Sign: Climate Change and Population Health in Alaska.” 10/2023. Harvard Kennedy School. Stuart Harris.

“Arctic Resilience in Times of Dramatic Change.” 10/2023. Arctic Circle Assembly. Jennifer Spence.

“One Health, One Arctic, One Community.” 10/2023. Arctic Circle Assembly. Stuart Harris, Douglas Causey.

“Arctic Innovation Lab.” 10/2023. Arctic Circle Assembly.

“Arctic Indigenous Peoples: Climate, Science, Knowledge and Governance.” 10/2023. Arctic Circle Assembly. John Holdren.

“Drawing Lessons from the Arctic Pandemic Experience.” 10/2023. Canadian Embassy in Iceland. Jennifer Spence.

“Grappling with the Arctic Methane Curveball.” 10/2023. Arctic Circle Assembly. John Holdren.

“ARCADE: Innovative Solutions to Social and Environmental Challenges in the Arctic.” 10/2023. Arctic Circle Assembly.

“Arctic Governance and Resilience: What Are the Priorities Over the Next 5 Years?” 10/2023. Arctic Circle Assembly. Jennifer Spence.

“The Finalists of the Frederik Paulsen Arctic Academic Action Award.” 10/2023. Arctic Circle Assembly. Stuart Harris.

“Charting a Course for Working Level Cooperation.” 10/2023. Arctic Circle Assembly. Jennifer Spence.

“Indigenous Reindeer Herding Youth: Pasture Resilience on Edge.” 10/2023. Brittany Janis.

“Arctic Ambitions: Pioneering the Green Transition Amid Geopolitical Tensions.” 11/2023. Harvard Kennedy School. Henry Lee, Halla Logadóttir.

“Advancing Canada’s Role as a Leader in Permafrost Knowledge and Policy.” 11/ 2023. Canadian Science Policy Conference. John Holdren, Jennifer Spence.

“Permafrost Pathways: Connecting Science, People, and Policy for Arctic Justice and Global Climate.” 11/2023. Canadian Science Policy Conference. John Holdren.

“Russia and the Arctic: Biodiversity and People.” 11/2023. Yale Russian and Eastern European Studies Dept. Margaret Williams.

“COP28 Climate Outcomes: What Do They Mean for the Arctic?” 12/2023. Online. Margaret Williams.

“Biodiversity Beyond Boundaries: Balancing Geopolitics, Science and Conservation in the Arctic.” 12/2023. U.S. National Park Service. Online. Margaret Williams.

“Arctic Innovation Lab.” 1/2024. Harvard Kennedy School. Halla Logadóttir.

“Transboundary Collaboration in the Arctic.” Alaska Marine Science Symposium. 1/2024. Margaret Williams.

“Impacts of Global Tipping Points on the Agricultural Sector.” 1/2024. World Economic Forum. Tessa Varvares.

“Resilience in the North: Mapping a Path and Measuring Progress.” 1/2024. Arctic Frontiers. Jennifer Spence.

“The Race to Save Ukraine.” 2/2024. Harvard Kennedy School. Margaret Williams.

“Can Lessons from Earth’s Past Help Us Survive Our Current Climate Crisis? A Talk with Renowned Scientist Michael Mann.” 3/2024. Harvard Kennedy School.

“Collaboration or Conflict in the Arctic: What to Do About Russia?” 2-3/2024. Harvard Kennedy School. Margaret Williams.

“Ocean Conservation Legal Roundtable.” 3/2024. Monaco Ocean Week. Margaret Williams.

Arctic Science Summit Week 2024. 3/2024. Jennifer Spence.

“The Future of Scientific Research and Innovation in the Arctic.” 4/ 2024. Arctic Encounter Symposium. John Holdren.

“From Local to Global: Navigating the Impact of Thawing Arctic Permafrost on Communities and Climate.” 4/2024. Arctic Encounter Symposium. John Holdren, Jennifer Spence.

“Waste Management in Rural Alaska.” 4/2024. Arctic Encounter Symposium. Nadezhda Filimonova.

“Building Healthy and Thriving Arctic Communities.” 4/2024. Arctic Encounter Symposium. Jennifer Spence.

“Africa + the Arctic: From the Margins to the Center.” 4/2024. Harvard Kennedy School. Jennifer Spence, Tessa Varvares.

“Arctic Security in the Age of Green Transition.” 4/2024. Harvard Kennedy School. Ríkey Hauksdóttir, Margaret Williams, Henry Lee.

“Promoting Waste Management for Sustainable Arctic Cities.” 4/2024. Online. Nadezhda Filimonova.

“Implementation of the National Strategy for the Arctic Region 2022.” 5/2024. Harvard Kennedy School.

“Crafting Climate Policy That Sticks.” 5/2024. Harvard Kennedy School. John Holdren, Fran Ulmer.

“Resilience in the North: Mapping a Path and Measuring Progress.” 6/2024. Arctic Congress. Jennifer Spence.

“The Architecture of Urban Cooperation.” 6/2024. Arctic Congress. Nadezhda Filimonova.

“Sustainable Economic Development in Arctic Communities.” 5/2024. Arctic Congress. Jennifer Spence.

“Arctic Geopolitics Pubinar.” 5/2024. Arctic Congress. Jennifer Spence.

“Navigating Geopolitics and Governance in the Arctic.” 5/2024. Arctic Congress. Ríkey Hauksdóttir, Jennifer Spence.

“Permafrost Thaw, Infrastructure and Indigenous Communities: Lessons from Alaska.” 5/2024. Arctic Congress.

“Localising Arctic Cooperation During Geopolitical Turmoil and Beyond.” 5/2024. Arctic Congress. Nadezhda Filimonova.

“Framing Adaptation and Enhancing Resilience to Climate Change in the Arctic Through the Lens of Indigenous Knowledge.” 5/2024. Arctic Congress. Jennifer Spence.

“Navigating Arctic Governance: Perspectives From and Beyond the Region on a Changing Geopolitical Landscape.” 5/2024. Arctic Congress. Ríkey Hauksdóttir.

“The Nordic States and the Future of Arctic Security.” 5/2024. Arctic Congress. Ríkey Hauksdóttir, Jennifer Spence.

“Global Crisis and Resilience Forum.” 6/2024. Harvard Kennedy School. John Holdren.

“Indigenous Leadership in Raising Global Climate Ambition.” 6/2024. Harvard University. Evon Taa’ajj Peter, Gunn-Britt Retter.

“Rethinking Global Climate Ambitions in the Face of Arctic Emissions.” 6/2024. Harvard University. John Holdren, Henry Lee.

“Call to Action on Permafrost.” 6/2024. International Conference on Permafrost. Jennifer Spence, Tessa Varvares.

“Permafrost Pathways: Connecting Science, People, and Policy for Arctic Justice and Global Climate.” 6/2024. International Conference on Permafrost. John Holdren.

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