



Quarterly Conservation Impact Report Q2 2023

Thanks to your support, our second quarter was busy and productive, with our conservation work spanning the Arctic. We moved forward with producing a pop-up interpretive center—the most northern in the world—to reach Arctic visitors in Svalbard, Norway. We also made plans for our annual Arctic Sea Ice Day awareness event, held each year on July 15. In addition, our policy department prepared a draft progress report on the Circumpolar Action Plan for Polar Bears, to be shared with delegates for feedback prior to the fall Range States Meeting in Iqaluit, Nunavut.

This impact report includes some highlights from our science, education, advocacy and outreach teams in the second quarter of 2023.

Science Highlights

Burr on Fur Tracking Devices

Impact of this work: the new tags will enable scientists to follow adult male polar bears and young bears, gaining valuable information on these little-understood groups; the attachment mechanism will also provide scientists with a new tool for tracking bears that are relocated away from human activity if collars are not available.

- The team is collaborating on the first peer-reviewed publication resulting from our work with partners to deploy our innovative [“Burr on Fur”](#) tracking devices on wild polar bears.
- We continue to test and refine the devices. For example, a recent deployment at a zoo partner facility highlighted the need for additional improvements to the tags. This time the hardware attaching the technology to the tag failed, which we had not seen before. Each deployment provides critical insights as we work toward finalizing the design and taking steps to make the product widely available.

Svalbard Maternal Den Studies (Norway)

Impact of this work: our den studies are helping us understand the needs of moms and cubs during the vulnerable denning period; this work also includes testing radar technologies to locate denning families under the snow, helping to protect them from disturbances.

- After our Norwegian partners retrieved the field cameras that we deployed at known polar bear den sites in the Svalbard archipelago this spring as part of our ongoing [Maternal Den Studies](#), data analysis has begun.

- Team members are drafting a manuscript for publication describing our findings from the last 7 seasons of monitoring maternal dens in Norway.
- Our Norwegian research partners have shared specific location data for the 2 bears in dens that we were able to detect with a new drone-based radar. This information will allow the radar operators to further calibrate the tool and refine their analysis prior to publication of their findings. Initial results are very promising.
- The science team will hold a debrief meeting with key partners this year to determine next steps for both maternal den monitoring and den detection work.

“Detect to Protect” Radar (Bear-dar)

Impact of this work: by developing an early warning technology that can detect approaching bears, we can help reduce conflict between polar bears and people.

- A fully functional mobile “[Detect to Protect](#)” radar tower unit has been completed and will be deployed by partners at a high-traffic area near Churchill, Manitoba this summer and again this autumn to help detect bears approaching areas of human activity.
- Our technology partner continues to help upgrade our firmware and we will work with the University of Alberta and others to train the Artificial Intelligence algorithm to recognize polar bears. The fine-tuning may include installing a system with a zoo partner.

Emerging Scientific Techniques

Impact of this work: by supporting these efforts, we’re expanding our understanding of the polar bear’s needs while also mentoring the next generation.

- Staff are building out a genomics workshop with partners to continue developing this area of work, which is providing important insights on genetic aging tools and how polar bears may or may not adapt in a warming Arctic.
- [Dr. Ruth Rivken](#), a postdoctoral fellow from the University of Manitoba, is leading our efforts in this arena in partnership with Environment Climate Change Canada and the San Diego Zoo Wildlife Alliance.
- Quantifying the amount of genetic diversity contained in polar bear populations, along with the environmental factors that influence that diversity, is an important step in understanding how polar bears can adapt in the face of climate change. Dr. Rivken’s research uses a combination of whole-genome sequencing, bioinformatics, and climate modeling to address this goal. Using genetic sequences collected from polar bears she will identify how their movement patterns are predicted to change under escalating Arctic warming, and if these changes are associated with a loss of genetic diversity in the most at-risk subpopulations.

External Research Support

Impact of this work: by helping to fund this critical research, we’re adding to our knowledge of polar bears, with impacts on their conservation.

- We continue to support the work of partners in long-term monitoring and ecology projects, with field work conducted this spring with both the Western Hudson Bay and Southern Hudson Bay polar bear populations.
- Meanwhile, our partners at the Norwegian Polar Institute successfully completed their spring fieldwork on Svalbard. Along with collecting a host of long term population metrics, this work will also provide known den locations for maternal denning projects next spring.

Zoo-based Research that Informs Polar Bear Conservation and Management

Impact of this work: these studies fill key knowledge gaps that can't be addressed with wild polar bears.

- This quarter we hosted a webinar for zoo and aquarium professionals presented by our colleagues at USGS, Drs. Karyn Rode and Anthony Pagano. They gave an overview of how various research approaches that rely on the access and behavior training possible with zoo bears have informed what we understand about wild polar bear monitoring techniques, energetics, and nutritional ecology in a warming Arctic.
- Consulting Scientist Thea Bechshoft completed the first draft of the Polar Bear Research Prospectus for the European Association of Zoos and Aquaria, to be shared at the EAZA Annual conference in Helsinki in September. Tailored to researchers and institutions interested in conservation-related studies on polar bears in EAZA facilities, the goal is to serve as a regularly updated guide that provides a strong foundation for collaborative research.

Traditional Knowledge Gathering

Impact of this work: by partnering with Elders and Traditional Knowledge Keepers, we were able to identify key questions and co-design a research project focused on Traditional Knowledge about polar bears and community coexistence..

- Our director of field programs, Kt Miller, spent time this spring with Knowledge Keepers and Elders in Churchill, Manitoba to validate results on a community human-polar bear coexistence project.
- Two of the project's key research partners, [Georgina Berg and Katie De Muelles](#), who are also Knowledge Keepers, participated in Polar Bears International's annual staff retreat in Bozeman, MT and have joined our Board of Advisors.

Education and Outreach Highlights

Education and Awareness

Impact of this work: our outreach highlights the issues facing polar bears and inspires people to take climate action.

- This summer, for the first time, Polar Bears International will have a pop-up interpretive center, the [Polar Bears International Ice House](#), in Longyearbyen, Norway in the Svalbard archipelago. The town offers great potential for conservation outreach during the summer tourism season, with more than 31,000 Arctic travelers passing through in July and August alone. Two PBI staff members traveled to Norway to help assemble the Ice House and install the interpretive display. The pop-up will be open from July 5-August 10 and will be staffed by two scientist ambassadors
- In addition, the team is gearing up for [Arctic Sea Ice Day](#), July 15th, which focuses on sea ice loss in the Arctic, why it matters, and how people can help. This year the theme is to “Talk About It.” Outreach includes website articles, toolkits, social media content, and a Tundra Connections webcast on how to hold productive climate conversations.
- Arctic Sea ice Day also brings the launch of our [Beluga Cams](#) in partnership with Explore.org. The cams reach tens of thousands of people worldwide and are part of our goal to inspire people to fall in love with the Arctic.
- The [Polar Bears International House](#), our interpretive center in Churchill, will once again host visitors this summer during beluga season, thanks to our Canadian operations team and field ambassadors.
- We recently hired a new part-time outreach specialist, Kayla McCurry, to support and expand our conservation programming.
- The outreach team will meet soon to plan for our fall bear season filming schedule, Climate Alliance field program and Polar Bear Week awareness event.

Media Coverage

Impact of this work: by sharing accurate information on polar bears and the threats they face with a global audience, we help combat misinformation and inspire action.

- The second quarter brought a wide range of press coverage on polar bears and our work, even though this is typically a quieter time of year. Articles ranged from a widely syndicated [Reuters](#) story on the most northern research station to a BBC [article on the “New Big 5” book](#), which features a chapter by our director, Krista Wright. Other coverage included an interview with our postdoc, Louise Archer, in the [Globe & Mail](#) and a feature on our director of conservation outreach in [JFL Science](#).
- Our media team has also been busy fielding film and other media requests for the fall bear season and beyond, with some exciting projects in the pipeline.

Policy, Management, and Advocacy

Policy and Advocacy

Impact of this work: encouraging policies that support polar bear conservation and engaging the public in advocacy.

- Our team recently completed an initial progress review of a key Range States document, The Circumpolar Action Plan for Polar Bears. The next step will be to prepare an official report to share with conference delegates at meetings this fall, prior to our participation in the [Meeting of the Parties](#) in October.
- Polar Bears International submitted a proposal for a session with partners at the [Arctic Assembly](#) in October, highlighting how NGOs, corporations and influencers can partner to advocate for positive change.
- We welcomed Steve Olson as a policy consultant this spring. He will be working closely with our Director of Policy and Advocacy. Steve is the former Director of Governmental Affairs for the Association of Zoos and Aquariums.

Analyzing Impacts of Bear Viewing

Impact of this work: providing data to decision makers will help inform science-based guidelines for Arctic tourism.

- Kamryn Dehn, a graduate student at the University of Miami, partnered with us on [analyzing the existing peer-reviewed literature around human activities and polar bear disturbance](#). She successfully defended her Masters thesis on that topic.
- Next steps include analyzing relevant brown and black bear publications, as well as a project investigating the human dimensions of polar bear tourism.

Southern Hudson Bay Coexistence (Ontario, Canada)

Impact of this work: to reduce human-polar bear conflict, allowing bears and people to thrive.

- [Coastal communities in Southern Hudson Bay](#) are seeing polar bears on land as the last of the spring sea ice melts away. Our team is planning two additional coexistence community meetings in late June to hear from residents about their concerns and needs. Additional meetings will be arranged in the fall in conjunction with polar bear fieldwork conducted by our partners.

Churchill Bear Smart Working Group (Manitoba, Canada)

Impact of this work: supporting the efforts of the Town of Churchill to become the world's first Polar Bear Smart Community.

- The [Churchill Bear Smart Working Group](#) held its first in-person meeting since the pandemic to review progress to date and create a new two-year work plan.
- Now that weather allows it, the town is finalizing the installation of the final bear-resistant bins for government-subsidized housing units and will shift focus to residential and other public-use bins in 2023/24.
- Polar Bears International supported a community open house to discuss the potential of deploying a Pyrolytic Thermal Oxidizer (PTO) waste system in Churchill - a way to cleanly incinerate waste that would reduce attractants and produce energy.

To view previous quarterly impact reports, visit our [Publication & Reports](#) section of our website.