



Quarterly Conservation Impact Report Q3 2023

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

Policy, Management, and Advocacy Highlights

Policy and Advocacy

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

- [Groundbreaking new research](#) led by our chief scientist emeritus, Dr. Steven Amstrup, addresses a long-standing climate loophole in the Endangered Species Act, paving the way for removing a critical roadblock to polar bear protections. The research has significant policy implications for polar bears and other species impacted by climate change. It can also serve as a model for other countries weighing development impacts.
- The team is preparing for fall policy meetings, including the Polar Bear Range States meeting, the Arctic Assembly, and the U.N. Climate Talks. As in past years, we are sharing credentials to attend the U.N. Climate Talks with young influencers and the ["BIPOC to COP"](#) initiative.

Southern Hudson Bay Coexistence (Ontario, Canada)

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

- This July, we [held meetings](#) with two coastal Cree communities in northern Ontario to hear about their needs and concerns related to living safely with polar bears.
- We are now working on meeting their equipment and training requests for the busy freeze-up period in the region this fall.
- Additional meetings will be arranged this 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](#) (CBSWG) finalized a series of new safety videos, funded by Polar Bears International and created in collaboration with our film production company partner, Handcraft. The videos will be rolled out to the public this fall. Handouts

with a QR code linking to the videos will be distributed widely to keep visitors and bears safe.

- The CBSWG appointed two new members to fill vacancies and continues to focus efforts on testing the relocation of bears captured near town to the southeast, moving forward with the next steps on bear-resistant waste bins around town, and longer-term efforts to bring full composting and incineration to the region.

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 for up to three months, gaining valuable movement information on these less-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.

- Now that fall is here, our team is sending out equipment for our last [Burr on Fur](#) tag deployments with zoo bears, allowing us to finalize refinements to the design. (We paused deployments over the summer as that is when polar bears are molting their old coats and growing new ones.)
- This last deployment will bring the research project to a successful conclusion, with a less-invasive, field-tested tracking alternative for polar bears now available. The tags are now ready to go into production as a confirmed polar bear tracking tool, with the potential for adaptation to other species, and a scientific paper on our findings is in the works.
- We are currently working with partners to make the tags publicly available to research and management organizations in the coming year.

“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.

- This fall will be our final year of testing the [Bear-dar](#) (radar detection) tower unit in Churchill, building on promising results from previous years.
- In partnership with the University of Alberta, we will fine-tune the system’s AI to examine its efficacy in distinguishing polar bears from other wildlife—the final step needed in the research and development related to these early warning systems.
- We will then evaluate the performance of the technology over the last two seasons with partners and publish a paper on our findings.
- As we wrap up testing, we plan to make the tower available for use by government partners starting next year.

Deterrence Testing

Impact of this work: controlled testing of various technologies and techniques to deter polar bears will help communities select the most appropriate and effective tools for their unique situations.

- Initial funding from zoo partners will kickstart this new initiative, providing support to build a comprehensive three-year plan.
- Working with collaborators, the program will include ballistic testing of “less-lethal” firearm rounds, as well as laboratory, zoo, and field testing of various deterrents, including high- and low-tech tools.
- We’re in the process of making plans for the International Bear Association meeting in Edmonton in Fall 2024. There, we plan to convene with experts to help design a safer live bear trap and identify potential deterrent tools in need of further testing.

Maternal Den Studies

Impact of this work: our den studies are helping us understand important aspects of denning ecology; this work also includes examining technologies to locate denning families under the snow, helping to protect them from disturbances.

- We will continue our long-term [den-monitoring project](#) on Svalbard in partnership with the Norwegian Polar Institute.
- While we are planning to skip a season as we shift our active den-detection work back to Alaska for final phase testing (see below), we are laying the groundwork with Norwegian partners to potentially examine vacant polar bear dens in Svalbard this spring to further validate data from last year’s ground-penetrating-radar pilot tests, taking advantage of equipment and crews that may be in the area for other research.
- Tentative plans by researchers to conduct fieldwork in the Southern Beaufort Sea this spring should lead to opportunities for final proof-of-concept den-detection work in Alaska—the landscape where this technology will be most applicable.

Emerging Scientific Techniques

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

- Genomics
 - o [Dr. Ruth Rivken](#), a postdoctoral fellow from the University of Manitoba supervised by Dr. Colin Garroway, 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 and is the focus of this research.
 - o We are supporting a genomics workshop with partners to continue developing this area of work, providing important insights on genetic aging tools and how polar bears may or may not adapt in a warming Arctic.

- Energetics Modeling
 - [Dr. Louise Archer](#), a postdoctoral fellow from the University of Toronto supervised by Dr. Peter Molnar, is leading our efforts in this area.
 - Following a publication this year on the energetics of polar bear lactation, Louise is turning her attention and skills to support the first analysis of our den-monitoring data from Svalbard in collaboration with Consulting Scientist Joanna Sulich, the Norwegian Polar Institute, and the San Diego Zoo Wildlife Alliance. We anticipate a submission for publication within the 4th quarter.
- Disturbance and Viewing Distances
 - Graduate intern Kamryn Dehn Allyson from the University of Miami has led this initiative. Her task is to summarize what is known in the published literature about tourism-viewing distances and human disturbance more broadly to inform the next steps, including possible further research to support management agencies in developing science-based guidelines.

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.

- We welcomed Wildlands, in Emmen, the Netherlands, to our 52-member strong [Arctic Ambassador Center](#) (AAC) network of zoos and aquariums.
- With strong support from our AAC network, we celebrated [Arctic Sea Ice Day](#) on July 15, raising awareness about sea ice loss in the Arctic and sharing information about how to talk about climate change with others to help make it a policy priority.
- [Climate Alliance](#) participants wrapped up their Strategic Framing Crash Course with facilitators from the National Network for Ocean and Climate Change Interpretation (NNOCCI). This year's participants are primarily educators from our AAC network. In October, the group will gather for an in-field experience in Churchill, Manitoba, and return to their home facilities across North America with strategic plans to effect change in their communities.
- Summer in Churchill saw almost 850 visitors to our interpretive center at the [Polar Bears International House](#). We have an excellent team of ambassadors lined up and in training for the upcoming fall season.
- The team is building the schedule for our fall [Tundra Connections](#) programming, including some exciting collaborations with Discovery Education that will be announced soon. Educators, mark your calendars for November 2nd!
- Our very first [summer camp](#) for youth in the Churchill community was a huge success. The kids, and Board Advisor Georgina Berg, had a fantastic time on the landscape. We will debrief the program and look to expand our impact in future years. We were able to

provide the program at no cost to participants due to a generous grant in support of the effort.

- The [Polar Bears International Ice House](#), in Longyearbyen, Norway, in the Svalbard archipelago, welcomed nearly 4,000 visitors during a short 40-day trial period this summer. Guests spoke with our scientist field ambassadors and learned about the ecology of Barents Sea polar bears and how to take action to combat climate change. Given the success of the pilot program, our team is working with the community to determine the dates and location for next year and will be including additional requested information about human coexistence with polar bears.

Media Highlights

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.

- Much of our press coverage in the third quarter centered around a recent paper by our chief scientist emeritus, Dr. Steven Amstrup, that paves the way for climate protections for polar bears under the U.S. Endangered Species Act. Coverage ranged from syndicated articles in [AFP](#) and [AP](#) to articles in [Inside Climate News](#), [The Wildlife Society](#), [CNN](#), [Forbes](#), [The Hill](#), and more.
- Our Beluga Cam and Arctic Sea Ice Day also attracted press attention, including articles in [IFL Science](#), [Martha Stewart](#), [Smithsonian](#), [The Weather Network](#), [Happy EcoNews](#), and more.
- 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.

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