



Quarterly Conservation Impact Report Q1 2023

Polar Bears International's conservation teams are off to a busy and productive start this year. From conducting science in the snowy fjords of Svalbard, to visiting with our inspiring outreach partners to producing our first TED Talk, our staff has been making an outsized impact on polar bear conservation.

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

Science Highlights

Burr on Fur Tracking Devices

Impact of this work: enabling scientists to follow adult male polar bears and young bears without permanent attachment mechanisms, in addition adding a new tool to track bears that are relocated away from human activity.

- Our innovative ["Burr on Fur"](#) tracking devices took home the gold in the first annual [Gizmodo Science Fair](#), an honor shared with other technology advances including a breast cancer vaccine, male birth control, and a fully electric aircraft developed by NASA.
- Several of our zoo partners applied two types of tag designs during routine health exams this year. Modified with feedback from previous wild and zoo deployments, one tag showed significant improvement in integrity and gripping power.
- Scientists will deploy the new and improved tags on wild polar bears this spring as part of planned field work in Western Hudson Bay by partners.
- Our team continues to work with technology providers to develop and refine a suitable GPS tag that would be more accurate and lighter than the current tag.

Svalbard Maternal Den Studies (Norway)

Impact of this work: learning more about moms and cubs during the vulnerable denning period and testing technologies to locate, and help protect, denning families from disturbances.

- This quarterly impact report comes right at the end of our [Svalbard field season](#). The team was able to deploy three camera systems near known den locations. Our partners will collect the den cams after the moms and cubs emerge in spring, returning them for analysis.
- A new partner conducted six den surveys over two known den sites to see if drone-based radar, which can determine snow depth and layers, can detect moms and cubs under the snow. This technology shows great promise as a tool for increased accuracy in finding denning bears in Arctic conditions to help humans avoid disturbing them.

“Detect to Protect” Radar (Bear-dar)

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

- Our team has ordered equipment to upgrade our trailer-based [radar systems](#), which are currently located in Churchill, Manitoba. The new systems will be wind-powered and more versatile.
- We are still training the radar’s Artificial Intelligence systems to recognize approaching polar bears, and are steadily making progress toward early warning systems that hold promise for reducing bear encounters.

Emerging Scientific Techniques

Impact of this work: expanding our understanding of the polar bear’s needs while mentoring the next generation.

- Dr. John Whiteman, our chief research scientist, is embarking on a novel approach to understanding aspects of metabolism and the physiological limits of fasting polar bears. Through our network of partners and funders, we are supporting the design and development of a research plan that will allow a young scientist to pursue this line of inquiry, mentored by Dr. Whiteman.

External Research Support

Impact of this work: adding to our knowledge of polar bears, with impacts on their conservation, by supporting critical research.

- Dr. Ian Stirling is working on his third publication since we began supporting his analysis of the massive behavioral database on polar bears that he compiled early in his career.
- Dr. Louise Archer, our postdoctoral fellow at the University of Toronto Scarborough, has submitted a manuscript on polar bear lactation energetics as part of her population energetic modeling efforts.

Zoo-based Research that Informs Polar Bear Conservation and Management

Impact of this work: filling key knowledge gaps that can’t be addressed with wild polar bears.

- Working with partners, we recently participated in meetings with European Zoo professionals, with a goal of creating a conservation research prospectus for European zoos with polar bears. Like their North American counterparts, European zoos are becoming more involved in conservation science research. These studies include developing new field techniques, better understanding polar bear reproduction and physiology, and filling key [knowledge gaps](#) about the species that cannot be addressed in the wild.

Education and Outreach Highlights

Education and Awareness

Impact of this work: highlighting the issues facing polar bears and inspiring them to get involved.

- [International Polar Bear Day](#), our annual awareness event, was a huge success this year, focusing attention globally on polar bears and the challenges they face in a warming Arctic, with extensive media coverage, a strong social presence, and a surge in visits to our website.
- We recently added three new [educational curricula](#) to our website — Mom and Me, Polar Bear Tracker, and Top of the World — and engaged with a global audience through two [Tundra Connections](#) webcasts.
- Staff Scientist Alysa McCall presented a TED Talk in New York City on polar bears that was extremely well-received. It was [released publicly](#) on April 11. It focuses on human-bear coexistence efforts including Churchill's Bear Smart Working Group and our Burr on Fur tags.
- We trained three interpretive field ambassadors to staff [Polar Bears International House](#) during northern lights season in Churchill. This team engages with visitors who travel to the North to see the northern lights, sharing information on polar bears and the threats they face in a warming Arctic.
- We released three films this winter that provide a window into the polar bears' world and Arctic research:
 - [Violet](#), on a female polar bear and her cubs in Svalbard, Norway
 - [A Day in the Life of BJ Kirschhoffer](#), on Svalbard fieldwork
 - [A Day in the Life of Joanna Sulich](#), on Svalbard fieldwork

Arctic Ambassador Center Network

Impact of this work: Our accredited zoo and aquarium partners reach millions of people every year with our conservation and advocacy messages, greatly amplifying our impact.

1. The past three months were busy ones for the members of our team who work with our [Arctic Ambassador Center network of zoos and aquariums](#). We focused attention on re-engaging with AACs that experienced significant staff turnover during the pandemic. At four North American and two European site visits, we provided presentations about our work and the impact of AACs on polar bear conservation. These visits included outreach opportunities with photos, interviews and Facebook Live events.
- Staff representatives attended an annual climate change awareness event, "[Defend the Ice](#)" night, hosted by one of our AACs in partnership with a local AHL hockey team. This campaign shares key messaging about the importance of ice to polar bears and hockey fans and also raises funds to support our work. Several other AACs are considering similar campaigns..

- We are beginning the process of reviewing two or three candidates to add to our 50-strong AAC network in 2023.
- Through one of our AACs, we connected by Zoom from Polar Bears International House in Churchill with [Future Healers](#), a program for local youth and their families who have been impacted by gun violence. It was an honor to be included in this work, sharing information on polar bears with a highly interested audience. We prioritize direct connections for AACs working with traditionally marginalized members of the community.

Media Coverage

Impact of this work: sharing accurate information on polar bears and the threats they face with a global audience, combating misinformation, cutting through the digital clutter and inspiring action.

- In Q1, coverage included articles on a tragic bear attack in Alaska and the importance of supporting communities to prepare for a new reality of more polar bears onshore (in the [Washington Post](#), [Agence France Presse](#), [Alaska Public Radio](#), [AP](#), [Newsweek](#) and others).
- Q1 also featured extensive media on International Polar Bear Day (in [IFL Science](#), [BBC Earth](#), [The Atlantic](#), Scripps Morning TV and more), plus miscellaneous coverage, including stories in [National Geographic](#), [Travel & Leisure](#) and [Gizmodo](#).

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 senior policy manager, Emily Ringer, launched an internal review of the Circumpolar Action Plan for Polar Bears under the Range States with our policy fellow, Alex Shahbazi. The plan will help inform Polar Bears International's approach at the 2023 Range States Meeting as well as our strategic support of conservation activities amongst international partners.
- Our advocacy Intern, Elliot Williamson, is creating recommendations for engaging Gen Z in advocacy efforts.

Southern Hudson Bay Coexistence (Ontario, Canada)

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

- After long delays due to COVID and other challenges, we joined partners in holding in-person [polar bear safety meetings in Fort Severn, Ontario](#), where polar bear sightings have increased in recent years. We continue to engage with other communities in Ontario, with additional in-person meetings planned for later this spring.

- We began distributing polar safety materials in English and Cree (a poster and brochure) to Cree communities living with polar bears in Ontario.
- In response to community concerns, we ordered a new, specially designed polar bear culvert trap to help relocate bears that may pose a threat to human safety.
- We purchased deterrence equipment, including bear spray, hand held flares, cracker shells and high-powered flashlights, that will be distributed to communities requesting these items.

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 next in-person meeting of the [Churchill Bear Smart Working Group](#) is being planned for later this spring.
- The group is preparing to install additional residential bear-safe waste bins in Churchill after the spring thaw.
- Participants held early discussions on the feasibility of hands-on polar bear deterrence training for local guides and polar bear guards.
- Efforts to pilot more sustainable and bear safe waste management options for Churchill continue with planned public meeting and outreach on combined composting and incineration with heat recovery planned for April.