POLAR BEARS INTERNATIONAL

FULL REPORT

THE CIRCUMPOLAR ACTION PLAN FOR POLAR BEARS

A QUALITATIVE INQUIRY INTO IMPLEMENTATION DYNAMICS & INTERNATIONAL COLLABORATION

2024

Prepared by Emily Ringer, Polar Bears International

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INTRODUCTION

Over the past fifty years, threats to polar bears have expanded. The conservation of the species is complicated by transboundary challenges like climate change, as well as escalating domestic issues like human-bear conflict. To meet this new era of threats, the Polar Bear Range States (PBRS) committed to a ten-year conservation plan—the Circumpolar Action Plan for Polar Bears (CAP)—from 2015 to 2025. The CAP is the first of its kind amongst the PBRS.

Conducted in early 2024, this study identified 1) dynamics influencing CAP implementation, 2) strengths and challenges of international collaboration under the CAP, and 3) visions for future configurations of this joint conservation work.

METHODS

This research was structured as an intrinsic case study and used qualitative methods to learn about PBRS collaboration. The primary data source was semi-structured individual and group interviews conducted with people who hold CAP implementation duties. Interview data was contextualized and supported by two secondary data sources: public documentation and attending the 2023 Meeting of the Parties to the PBRS. All data was de-identified and analyzed through qualitative thematic coding and analysis.

Overview of Participant Details

Individual Interviews	Group Interviews	Total Participants	PBRS Countries Represented	PBRS Government Participants	Non-PBRS Government Participants
7	3	18	4	12	6

Table 1: This table shows the numbers and types of interviews conducted in this study, as well as a high-level overview of interviewee demographics. Though efforts were made to sample a diverse array of implementors, this sample should not be considered representative of all those involved in CAP implementation.

FINDINGS

Key findings from this study point to strengths, challenges, and opportunities within international collaboration on polar bear conservation. The data showed the following:

- Both technical and social dynamics influence CAP implementation. The CAP Midterm Review and the addition of the Project Officer improved individuals' ability to execute their tasks. Participants expressed desire to further simplify CAP processes through reducing the number of actions, clarifying objective metrics, and modifying program management tools. On the social side of implementation, data showed the importance of bringing in outside expertise, elevating strong leaders and protecting their time, striving for active participation from all parties, planning some in-person gatherings, and—where possible—taking care to attend to language barriers.

- Collaboration on CAP creates both advantages and obstacles for international colleagues. Collaboration is generally welcomed and deemed important for broader polar bear conservation goals, with the greatest benefits coming from Information exchange between countries. Many participants explained how international priorities can bolster their local efforts, but, at the same time, international collaboration was established—almost unanimously amongst participants—as a drain on already limited domestic staff capacity and funding. These realities are additionally challenged by the impacts of both local and international politics on collaborative efforts. Such obstacles are generally outside the control of implementing bodies and therefore pose significant challenges to robust engagement at the international level.

- Future collaboration amongst the PBRS is broadly welcomed but may require some revisions. Data showed a need to simplify the PBRS' efforts by taking on fewer joint actions and possibly structuring the work differently. Many participants see the 1973 Agreement as an important foundation but said the group's work should progress beyond the Agreement—through the CAP, Working Groups, etc.—to elevate Indigenous Knowledge and meaningful Indigenous participation and address new threats to polar bears. Indigenous Knowledge and climate change received ample attention, demonstrating the current and future importance of these areas to the PBRS' work. Participants also shared the types of conservation efforts that seem best suited for the international body, based on CAP's current foci. Though data in this section contained nuance, in general, most felt that it was important to retain some degree of collaboration on climate change communications, harvest, human-bear conflict, Indigenous Traditional Ecological Knowledge, and a limited body of research.

Recommendations

Based on interview analysis, supported by secondary data, this research offers the following recommendations to the PBRS—for consideration during discussions about the next iteration of their work after CAP concludes in 2025:

1 **Simplify the PBRS' collective goals and work.**

Data showed that people place value in the symbolic commitment of the five PBRS working together, and they have a desire for some ongoing active international collaboration. Still, finding a composition of joint work that is meaningful and achievable is a challenge. Simplification of these efforts to better achieve this balance can happen on two levels: vision-setting and technical.

Vision-setting – While the CAP was greatly simplified under the mid-term review, data shows that its breadth may still be too broad for the capacity of the PBRS. In setting a vision for the next round of international collaboration—however that may look—the PBRS should take special care to define what success looks like for this body, not for polar bear conservation at large. Determine the work that is a good fit for this particular composition of people and countries, and set aside the rest.

Technical – The PBRS can simplify their efforts through a variety of tangible and technical mechanisms, including maintaining the momentum of the midterm review and the project officer role, simplifying reporting mechanisms, reducing the number of actions, and focusing on goals that all five countries are committed to investing in at the international level.

2 **Assign strong leaders and protect their time.**

Most participants mentioned the tangible impact strong leadership has on successful implementation—be that from a HOD, working group lead, or action lead. While challenges of staff capacity and limited time frequently impact leadership competence, it is in the PBRS' best interest to promote intentional and strategic leadership selection for all subsidiary groups.

3 **Commit to some in-person meetings.**

In most interviews, participants mentioned the unique value of seeing international colleagues face-to-face. While remote work is essential to the PBRS collaboration, the body should continue to strive to organize some meetings in-person to increase trust and offer opportunities for international colleagues to speak more freely about sensitive topics.

4 **Maintain information sharing.**

The most frequently referenced benefit to international collaboration was the sharing of information between circumpolar colleagues. Participants made it clear that some form of international collaboration on polar bear conservation was important, and that no matter the shape these future efforts take, parties should strive to maintain open channels of formal and informal information exchange.

5 **Engage Indigenous partners early.**

Maintaining, strengthening, and expanding Indigenous contributions and collaboration is a clear priority for the PBRS—and central to objectives surrounding harvest and integration of Indigenous Knowledge. Any future configurations of this work should take care to communicate early with Indigenous partners and learn the conditions that will best support their sustained involvement. Investigate if there are ways to improve the structural inclusivity of future collaborative work—including, but not limited to, how meetings are run, how progress is tracked, and how knowledge is shared, responded to, and weighted.

6 **Consider other ways of structuring joint work.**

Given frequently referenced staff capacity issues, as well as challenges associated with merging local and international priorities, the PBRS could consider organizing a future version of this collaborative work through a combination of top-down and bottom-up implementation approaches—or locally led implementation of internationally set goals. Such a system may help balance acquiring effective commitments from all parties without deterring participation in international collaborative efforts. For the PBRS, this may also reduce work volumes for delegations while allowing for more diverse and regionally sensitive approaches to meeting international objectives.

7 **Add expertise to complex issues.**

Polar bear conservation intersects with many complex systems, including human rights, climate change, pollution, and global conflict. The PBRS are limited in their ability to thoroughly remedy any of these intersecting challenges, but that does not mean their contributions to the solutions are inconsequential. The merging of Indigenous Knowledge with western science and tackling climate change are two areas where this is particularly true. Incremental change can often be unsatisfying in the face of urgent challenges, yet it is an important part of systemic transformation and improving the odds for favorable conservation outcomes.

CONCLUSION & NEXT STEPS

According to participants, this research highlights the value in some degree of international collaboration on polar bear conservation. The exact details of these efforts should repeatedly be evaluated and adapted, as they are heavily influenced by international politics, domestic dynamics, shifting conservation paradigms, and escalating environmental challenges.

As the PBRS reflect on the last nine years of CAP collaboration and look towards future efforts, this study's findings point to a period of simplified goals, ongoing information exchange, and expanded investment in relationship building and partnerships. Polar bear conservation unfolds across many levels of social organization, each which hold unique opportunities and complexities. Strong and respectful relationships and regard for the worth of incremental change—even in the face of existential environmental challenges—are paramount to these conservation efforts.

To learn more about this research or to discuss its application to future collaborative efforts, please contact Emily Ringer at Polar Bears International.

Thank you for your attention and for your commitment to polar bear conservation.

POLAR BEARS INTERNATIONAL

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INTRODUCTION

Polar bears roam the top of our planet, following the sea ice that offers them access to a bounty of sea life below. Despite their impressive size and ability to thrive in one of the world's harshest environments, polar bears are threatened by human activity. The International Union for the Conservation of Nature (IUCN) lists the polar bear as a vulnerable species, citing sea ice loss from climate change as their greatest threat.[20] The transboundary nature of polar bears places the species on the international conservation stage.

In 2015, the Polar Bear Range States (PBRS)—including Canada, Greenland, Norway, Russia, and the United States—launched a ten-year international conservation plan called the Circumpolar Action Plan for Polar Bears (CAP). This plan is the first of its kind between the PBRS. Executing cross-border conservation collaboration and balancing local needs with international commitments are common challenges in international environmental action plans. This research is structured as a qualitative case study that takes an in-depth look into the unique dynamics of the implementation of this conservation plan.

Through semi-structured individual and group interviews and gathering supplementary data through public document review and attending the 2023 MOP, this research is designed to identify commonly experienced strengths and challenges amongst those charged with CAP implementation—with the hopes of informing future collaborative efforts. All data was analyzed through thematic coding and analysis. Outcomes of this study show the technical and social dynamics influencing CAP implementation, focus areas of CAP that implementors perceive to be most useful at the international level, unique advantages and disadvantages to international collaboration between the PBRS, and visions for future efforts.

RESEARCH OBJECTIVE & QUESTIONS

This research aims to explore dynamics that impact implementation of the CAP and identify opportunities for further strengthening the fit of future international collaboration to on-the-ground conservation realities. The CAP runs from 2015 – 2025, and these outcomes are intended to support post-2025 planning. The research questions are:

1. What dynamics influence the implementation of CAP?
2. What are the strengths and challenges of international collaboration on CAP?
3. How do CAP implementors perceive the usefulness of different elements of the plan, and what are their visions for the future of joint work in international polar bear conservation collaboration?

Researcher Identity

It is important to note that the primary researcher in this study, Emily Ringer, has worked in Arctic conservation for a decade—in roles spanning from field logistics to communications to policy. She is currently employed by an international polar bear conservation NGO and has worked with members of the Polar Bear Specialist Group (PBSG), the scientific advisory body to the PBRS, prior to this study. Ringer has her Masters in Public Policy with a focus on environmental policy. She is interested in the intersections of environmental policy, social justice, ecology, and the balance between international and local priorities. She is a settler of European descent and has lived her entire life on unceded lands now called the United States, spending months at a time in the Arctic but never living in the Arctic. Ringer's identity and experiences cannot be separated from this study, and she seeks to consider and represent them as part of the lens through which these outcomes and recommendations are offered.

METHODS

Qualitative research methods best support this inquiry because it seeks to describe CAP implementation, its processes, and how dynamics of the PBRS and CAP implementation impact each other.[2] The research outcomes are rooted in the experience of the participants and may have practical implications for on-the-ground managers, administrators, and scientists.[5]

This research explored dynamics of CAP implementation through an intrinsic case study—allowing for an in-depth inquiry into this 10-year conservation plan. This case study employed a synchronic approach, relying on data from multiple individuals to highlight key themes within the case of CAP implementation. The PBRS have collaborated on work under the 1973 Agreement on polar bears for 50 years, but the CAP is the first time this body has chosen to structure its work through a top-down, time-bound species conservation plan. Consequently, a complex and detailed understanding of this case is important for informing next steps. Utilization of multiple sources of information—including semi-structured interviews and supplementary information from attending the 2023 MOP and corresponding documents—provided this in-depth description of implementation and international collaboration.[5]

Semi-Structured Individual & Group Interviews

Conducting individual and group interviews with people who are charged with CAP implementation provided an in-depth understanding of this topic, grounding the findings and recommendations in the experiences of the participants. Interviews were conducted between December 2023 and March 2024.

Recruitment & Sampling – This study employed purposeful nonprobability sampling to strategically select individuals for interviews—allowing for the researcher to identify and learn from those who are particularly knowledgeable about CAP, CAP implementation, and the PBRS.[2, 11] The goals of this sample selection were to emphasize depth of

knowledge and to focus on similarities between the challenges participants faced while implementing CAP.

For initial recruitment, the researcher contacted two individuals, or key informants, involved in CAP implementation—one government representative and one non-government scientist. After introducing them to the project over email with a project overview document and informed consent form (Appendix A), the researcher spoke with the key informants to discuss the project and the possibility of getting connected to other potential participants. The key informants recommended other implementors and proceeded to connect the researcher to those individuals to continue purposeful nonprobability sampling outreach.

The goal of these interviews was to obtain an in-depth understanding of CAP implementation dynamics, grounded in the experience of implementors. Though efforts were made to sample a diverse array of implementors—across countries, backgrounds, communities, and disciplines—this sample should not be considered representative of all those involved in CAP implementation. The final sample included central government representation from four of the five PBRS, the PBSG, one PBRS working group, one Indigenous-led government, and administrative support to the PBRS. Interviewees participated from seven countries. Seven individual interviews were conducted as well as three focus groups—with group numbers ranging from two to six participants, for a total of eighteen participants over ten distinct interviews. An overview of this study's sample is summarized in the below in Table 1.

Overview of Interview Participant Details

Individual Interviews	Group Interviews	Total Participants	PBRS Countries Represented	PBRS Government Participants	Non-PBRS Government Participants
7	3	18	4	12	6

Table 1: This table shows the numbers and types of interviews conducted in this study, as well as a high-level overview of interviewee demographics.

Materials & Tools – Interviews followed a semi-structured format with a set order and list of topics to cover, while also maintaining the ability to include follow-up prompts for additional detail. A semi-structured approach allowed for both comparable responses and the flexibility to pursue deeper investigation.[17] The same protocol was used in individual and group interviews (Appendix B).

Written and verbal consent was received from each participant before the scheduled interview (Appendix A). At the beginning of each interview, participants were asked for consent to record the interview. Some participants chose, ahead of the interview, to not be recorded. In these cases, additional time was added to those interviews to allow for note taking during the discussion. Interviews were conducted over Zoom or telephone, and all recorded interviews were transcribed using Zoom's transcription feature.

Supplementary Information

In addition to gathering implementors' perspectives through interviews, secondary data was gathered through a review of public documents on the PBRS website and observation of the Meeting of the Parties (MOP) to the PBRS in October of 2023.[15] The researcher attended the MOP as a staff member of an accredited observer organization, recording notes about conversation topics to supplement the presentation documentation provided by each speaker. To protect privacy, all data from these supplementary sources was de-identified. Incorporating this de-identified, supplementary data into the project allowed for a broader context than was possible to collect exclusively through interviews. However, it is important to note that interview data was the primary data source and therefore weighted more heavily in analysis.

Analysis

Interviews – Before entering the data analysis phase, all interview transcripts were checked and cleaned against the original recordings for accuracy. Then, all identifiable details—including but not limited to names, positions, locations, departments, references to geography—were removed from the transcriptions. The same de-identification process was applied to interview notes. After cleaning and finalizing all de-identified data, all recordings were deleted.

To identify common occurrences between the data sets, thematic coding and analysis was implemented. The researcher began by slowly reading through each transcript

without intention of analysis, getting immersed in the data. The researcher then engaged in an open-coding phase, reading through each transcript twice more to generate initial inductive codes.[2, 17] Codes were organized and tracked by migrating the transcripts and notes into a two-column table and listing emerging codes in the right-hand column, across from the relevant transcript expert.[20] A few inductive codes that emerged from this process include specific expertise, in-person gatherings, geo-politics, and knowledge conflicts.

All transcripts and notes were read three more times to generate additional codes, modify codes, and look for larger themes among the codes. During this process, a code book was constructed, grouping codes into broad categories including 'technical and social dynamics influencing CAP implementation,' 'international collaboration drawbacks,' 'international collaboration benefits,' 'future visions,' 'harvest and Indigenous rights,' and 'climate change.' The most frequently referenced codes were tracked within the codebook to help weight which topics should be expanded upon in the analysis. The codebook was adjusted to reflect these most common codes further and establish four themes emerging from the codes.[8] See Appendix C for the complete codebook.

Before analysis, a thematic analysis table was created, drawing all instances of each theme into one location and keeping each quote labeled with its original code. This helped sculpt an in-depth picture for each theme, through the view of participants, and facilitated the synthesis of each code into broader results. Within the codebook, only a few de-identified quotes are showcased, and all other participant perspectives were paraphrased. This approach helped to maintain complete anonymity amongst participant perspectives.

Supplementary Information – Qualitative thematic coding and analysis was also applied to supplementary data from public document review and meeting observation. Using the above-mentioned codebook (available in Appendix C) as a guiding tool, documentation and supplementary notes from the 2023 MOP were reviewed for occurrences of established codes or themes. Each instance of each code was labeled and then integrated into the thematic analysis tables and included in broader analysis of results. As mentioned before, interview data was the primary data source for this inquiry and was weighted more heavily in analysis.

See **Appendix D** for the literature review that supported this research.

RESULTS

This section reviews key qualitative findings from interviews with 18 individuals involved in varying degrees of CAP implementation, incorporating supplementary data where appropriate. While these results primarily describe the experiences of key implementors, they are not meant to be interpreted as generalizable data or representative of all experiences of CAP implementation. These results focus on common themes amongst the data and do not cover outlier perspectives.

Key Findings – Research Question 1

Theme: Technical and social dynamics influence implementation

Interview participants highlighted a variety of technical and social dynamics that impact their roles in CAP implementation. Understanding the dynamics that support and hinder implementation is important for informing any future collaborative work conducted by the PBRS. The following captures commonly referenced dynamics, which are also summarized visually in Figure 1 at the end of this section.

- CAP's Technical Build – While participants welcomed CAP's improved structure created during the Midterm Review and under the Project Officer, many find some of the program management tools and reporting structures to be too complicated for the PBRS' setting, given contributors' already limited capacity. Some worried that increased reporting and bureaucratic structures have decreased a broader emphasis on informal conversation—which, according to participants, is not a measurable metric but improves collaboration. Additionally, many participants felt that the current iteration of the CAP still has too many actions and expressed a desire to scale back CAP's focus and strengthen the effort implementors invest in that limited scope. On the other hand, participants appreciated technical elements of CAP's structure including regular meetings and bite-sized implementation windows. The balance between too much or too little structure in an international conservation plan is delicate, and the PBRS may still need to refine the composition that best supports the unique shape of this work. In terms of metrics, participants

believed the actions have well established metrics but acknowledged that metrics for the objectives are still largely undefined. Determining meaningful and achievable metrics will be important if the PBRS continue to work on these objectives.

- Specific Expertise – Interviews revealed some tension between the role and value of non-governmental or non-polar bear specific experts within CAP implementation. On the one hand, many participants acknowledge the importance of having the support of unique and external expertise within CAP implementation efforts—from communications specialists in the Climate Communications Working Group to sea ice specialists in the Polar Bear Specialist Group to a project management specialist organizing PBRS operations. On the other hand, each non-government participant referenced instances in which they felt their contributions to PBRS work was devalued —either because the PBRS did not use the resources their groups provided or because the role of non-government contributors was limited in CAP efforts. Participants described a struggle between prioritizing diversity in expertise vs. simplicity in operations. While there is no standard formula for making these determinations, it may become important for the PBRS, as a group, to define their values and boundaries with regards to non-governmental contributors.
- Engaged Leaders & Participants – Strong leadership and engaged members are central to progress on CAP implementation. Nearly every participant referenced the value strong leadership has played in a delegation, working group, objective, or action. Participants also identified the importance of active contributions from all PBRS members to shared work, highlighting the impacts of uneven distribution of labor or participation. Lost momentum on key projects or actions and reduced appetite for collaborative work were the most reported impacts to uneven participation—a trend that can be seen in CAP progress documentation as some actions progressed quickly at first but slowed in later implementation phases. Participants also acknowledged that some degree of participation or leadership unevenness is inevitable when considering varying staff capacities between countries and impacts of local politics, but the reported impact of strong leadership and balanced participation suggests that the PBRS should do all they can to foster these qualities across future shared work—be that amongst government or non-government contributors.
- Physical & Cultural Barriers – A smaller but noteworthy group highlighted the collaborative challenges posed by language barriers, dispersed time zones, and cultural differences, a theme also featured in the literature. While these elements are inherent in international work, it is important for the PBRS to consider the role they play in increasing the complexity of collaborative tasks and to continue to invest in developing personal relationships with their colleagues across borders.

Visual Overview of Qualitative Results – Key Findings, Research Question 1

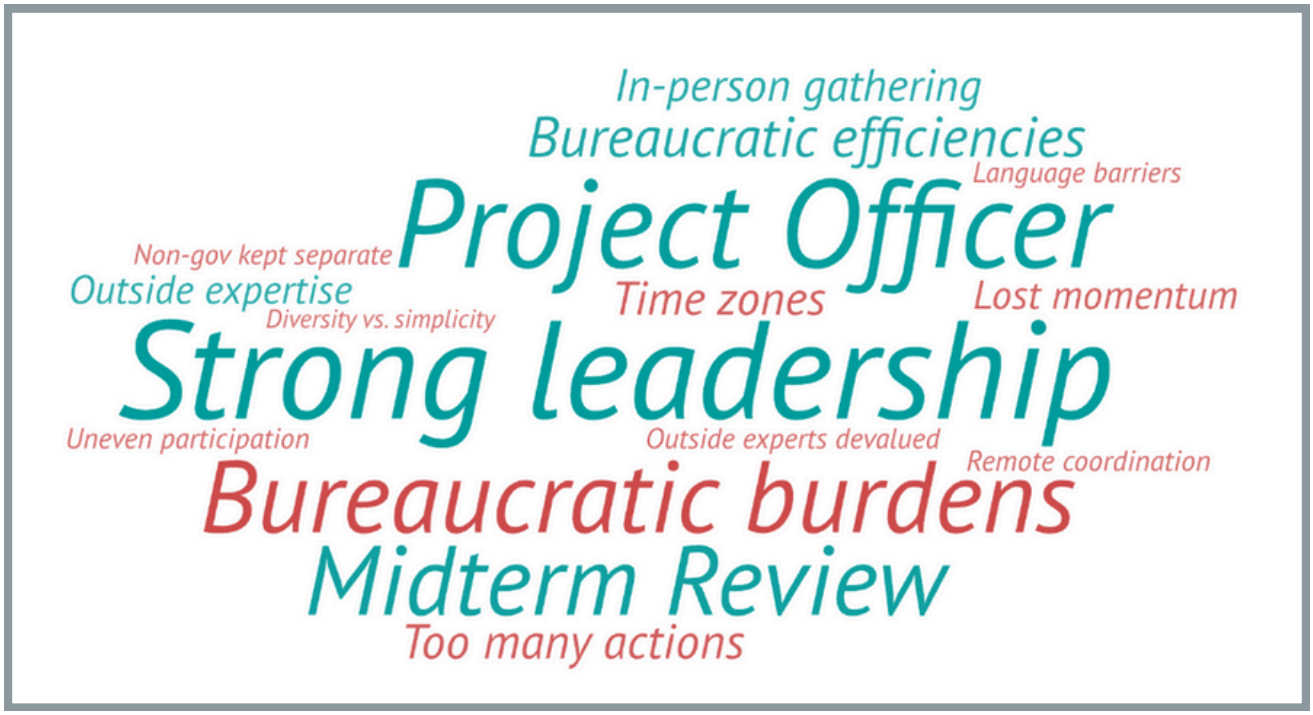

*Figure 1: This word cloud highlights the dominant codes and concepts behind the key findings to Research Question 1: "**What dynamics influence the implementation of CAP?**" The size of each concept in this word cloud corresponds to its frequency of occurrence across interviews. Teal words represent dynamics that have positively influenced implementation while rust colored words represent dynamics that have negatively influenced implementation. This visual represents the perspectives of 18 CAP implementors and is not meant to be interpreted as generalizable data.*

Key Findings – Research Question 2

Theme: International collaboration has both advantages and challenges.

Beyond the specific technical and organizational functions of cooperation on the CAP, this case study highlighted broader themes of advantages and challenges within international collaboration. These dynamics cannot be separated from the PBRS process of delivering on the CAP and therefore must be considered as part of the complete picture impacting implementation. Below are the most referenced dynamics across the study's interviews, documents, and observations, which are also summarized visually in Figure 2 at the end of this section.

Advantages

- Information Exchange – Nearly every interview touched on the value of information exchange between the PBRS and highlighted it as one of the primary benefits of international collaboration. While sharing information is technically part of the 1973 Agreement, participants celebrated the increased exchange of new learnings and approaches under this structure of work. Both formal and informal information exchange appear important in this process. Documentation on the PBRS website and first-hand accounts from participants shows that the PBRS Project Officer has facilitated the formal processes of information exchange between countries. On the informal side, many participants referenced the role unstructured dialogue has played in developing cross-country relationships and building trust—elements that many believed are essential to producing meaningful outputs and on-the-ground progress.
- Some Collaboration Is Better Than None – As the next section will show, participants identified significant challenges to international collaboration. Notably, most participants still expressed the belief that some active collaboration between the PBRS is much better than none. Though the process of developing and implementing the CAP has come with challenges and future efforts may require refinement, participants are still encouraged to see the PBRS collaborating in an active and organized manner. The personal relationships and quality of people involved in implementation contributed to participant's enthusiasm for active international collaboration. It appears important to these implementors that the PBRS maintain a system of collaboration in the future, beyond the 1973 Agreement.
- Bolstering Local Priorities – In this case study, international collaboration between the PBRS both bolsters and infringes on local priorities. Each government group or representative identified areas where this collaboration compliments and strengthens their national efforts—including climate change communications, mitigating human-bear conflict, and harvest management. Countries varied on which work complimented their local efforts, which complicates the process of aligning on international goals. Participants said that internationally set priorities provide key benefits, including offering international gravitas to work that is vulnerable to national political churn and setting an international bar for polar bear conservation that national agencies must try to meet.

Challenges

- Staff Capacity – Data from interviews and supplementary observation from the 2023 PBRS MOP showed that all five PBRS countries are confronted with capacity limitations when it comes to international collaboration. For staff in most countries, their capacity is already stretched thin at the domestic level, making it particularly challenging to sure up time for international responsibilities. In many cases, participants held multiple roles with international responsibilities. For example, an employee of a national government may also serve as a member of the PBSG, or the Head of Delegation for a country may also serve as an objective lead and an action lead on CAP implementation. Participants familiar with international collaboration on other topics remarked that a relatively small number of people are involved in CAP implementation. On top of this, CAP related duties are often a small percentage of an individual's job description. In short, most implementors are not given additional time to commit to international collaboration—they are squeezing these responsibilities onto an already full plate of domestic duties. On the topic of staff capacity, participants also called out frequent staff turnover in PBRS government positions as a challenge for advancing international collaboration.
- Funding – Related to national capacity issues, the data also showed limited funding to be a common challenge within international collaboration. Without an international financial mechanism, members of the PBRS are relying on domestic budgets to support their international responsibilities—and domestic budgets are already tight for many countries. In this restrictive budget environment, data showed that some find an international focus on polar bears drains resources that are needed for local priorities. For one country, 95% of their available funding goes to two domestic priorities, both of which are still underfunded under this arrangement. When countries are already struggling to meet local priorities with their available budget, international priorities must often take a back seat. Funding appeared to be essential to the success of some action items. One country was able to point to multiple instances in which direct funding of a specialist resulted in concrete deliverables and the completion of an action. The literature reinforces this data, showing that maximizing funding is one of the strongest ways to improve implementation and suggesting that the strongest conservation results come from allocating more funding to conservation actions than research and monitoring.[3]
- Politics – Data pointed to the challenges national and international politics pose to international collaboration. On a national level, significant administrative change can result in budget cuts or rearranged priorities. Climate change, for example, has the

potential to be a polarizing issue in some PBRS countries and is vulnerable to political churn—despite being the primary threat to polar bears. On an international level, global conflict involving any of the five PBRS has the potential to change the dynamics of collaboration and limit full and meaningful engagement.

Visual Overview of Qualitative Results – Key Findings, Research Question 2

*Figure 2: This word cloud highlights the dominant codes and concepts behind the key findings to Research Question 2: "**What are the strengths and challenges of international collaboration on CAP?**" The size of each concept in this word cloud corresponds to its frequency of occurrence across interviews. Teal words represent strengths while rust colored words represent challenges. This visual represents the perspectives of 18 CAP implementors and is not meant to be interpreted as generalizable data.*

Key Findings – Research Question 3

Theme: Not all polar bear conservation work is well suited for CAP.

Tensions between what should be handled at the local vs. the international level are common in multilateral environments. As mentioned in previous sections, the 2020 Midterm Review simplified CAP's structure and the extent of CAP's reach. Still, data from interviews shows that CAP implementors largely agree that CAP's mandate should be simplified further. To help clarify the direction of that simplification, each participant was asked what types of polar bear conservation work or activities they have found best suited for the international setting. While answers varied, a few distinct themes emerged:

- Climate Change Communications – All government participants or groups called out climate communications efforts as essential work for the PBRS. Recognizing the limits of each country's natural resource management authorities to regulate national greenhouse gas emissions—as well as the limits of the PBRS to address global climate change as just five countries—this collaborative work offers an avenue for the PBRS to apply national and international pressure at the same time. Participants referenced the value of having international collated messaging on a topic that can be vulnerable to national political churn. The PBRS' embrace of strategic climate communications provides a supranational neutral territory for approaching the primary threat to polar bears. Some participants expressed desire that this climate-focused work take on a bolder tone—though this would require more resources, which are scarce amongst the PBRS.
- Harvest – While harvest was largely acknowledged to be a local and regional issue, primarily led by communities who partake in harvest, many referenced the importance of a sustainable harvest framework at the PBRS level. For countries who practice harvest, this effort has the potential to complement some of their local work. The 1973 Agreement was originally built around harvest and therefore many participants found it relevant to continue that conversation at the international level. Harvest is a topic prone to mismatches in institutional fit and governance scales due to some of the ways Indigenous rights, Indigenous Knowledge, climate change, and western science intersect at this topic. Discussions of harvest and Indigenous rights surfaced frequently among study interview participants. See page 22 for a full overview of that data.
- Human-Bear Conflict – Perspectives on the degree to which the PBRS should collaborate on human-bear conflict varied, but there was consensus that the information exchange element of this work is critical. Participants referenced the value of reporting conflict incidents to the entire group and the importance of better understanding the causes of—and solutions to—human-bear conflict. Some participants emphasized the on-the-ground, local nature of conflict management and expressed desire to narrow the scope of this work in the international arena. Analysis of this topic across participants points to a need for conflict work to be restructured, but the practice and processes of information exchange should be maintained—particularly as conflict dynamics, inevitability, continue to shift in a rapidly changing Arctic.

- Research – Opinions on research coordination at the PBRS level were decidedly mixed. Many participants mentioned the value of collaborating on some research while also asserting that not all research is appropriate for the agenda of this body. Participants emphasized the importance of population monitoring but also pointed out that much of this can be managed through domestic and bilateral structures. On the topic of population monitoring, a few participants emphasized the importance of providing funding for research in minimally studied sub-populations—expanding beyond the frequent emphasis on Churchill, Manitoba, Canada and Svalbard, Norway. Given the costs and complexity of polar bear research, data in this case study points to a need to narrow the scope of Objective 7—prioritizing research that does not fall within domestic or bilateral bounds and maintaining processes of scientific information exchange.
- Indigenous Traditional Ecological Knowledge (ITEK) – While ITEK is not a stand-alone CAP objective, it is a frame the PBRS have committed to infusing more holistically throughout PBRS operations. Throughout the data, ITEK was frequently mentioned in relationship to harvest management, and all PBRS countries acknowledged the importance of strengthening ITEK's role in their collaborative work. See page 22 for a full overview of that data.

The CAP is structured around seven objectives, each serving as an umbrella over a suite of specific actions. Table 2, below, frames the distribution of participants' responses regarding which work is best suited for collaboration amongst the PBRS within CAP's objectives. Not all participants gave explicit answers on this topic, so this table only reflects specific mentions of work that is well or poorly suited for the PBRS. Please note that this table is a simplified visualization of data, and it is meant to serve as a supplement to the context and nuance provided in the bullets above.

CAP Objective #	CAP Objective Content	Good fit for PBRS	Poor fit for PBRS
1 ET	Track and reduce emerging threats to polar bears.		
2 CCC	Communicate to the public, policy makers, and legislators around the world the importance of mitigating GHG emissions to polar bear conservation.	6	1
3 EH	Ensure the conservation of essential habitat for polar bears.	1	
4 HM	Ensure that harvest of polar bears subpopulations is managed in a biologically sustainable manner in accordance with sound conservation practices.	5	
5 HBC	Manage human-bear interactions to ensure human safety and to minimize polar bear injury or mortality.	5	1
6 T	Ensure that international trade of polar bears is carried out according to conservation principles.	3	1
7 PRM	Carry out coordinated circumpolar population research and monitoring to monitor progress toward achieving the vision of CAP.	5	2
ITEK WG	Inclusion of Indigenous Traditional Ecological Knowledge (ITEK) in the PBRS as part of the ITEK Working Group	7	

Table 2: This table shows the general distribution of participants' responses regarding what types of polar bear conservation work is best suited for the PBRS. This table is a simplified visualization of the data—please see above analysis for deeper context and nuance.

Key Findings – Research Question 3 continued …

Theme: Future collaboration is broadly welcomed but will require revisions.

Participants applauded the PBRS actively working together again and unanimously saw value in continuing some international collaboration on polar bear conservation. However, most highlighted the need for the structure of that collaboration to evolve in ways that better support domestic and international progress. Key findings are detailed below and summarized visually in Figure 3 at the end of this section:

- Simplify – The most common vision for this future collaboration called for a simplification of the PRRS' goals and of the way the PBRS organize their shared work. Many referenced the magnitude of the CAP undertaking and expressed doubt that the outcomes of this style of work justifies the amount of effort it has taken. Participants suggested limiting the focus of future collaboration and structuring the work differently—perhaps in the form of shorter-term work plans that focus on far fewer actions. The next iteration of collaborative work should significantly decrease the suite of actions, focusing on goals where deliverables can be both completed and implemented across countries. If all five countries cannot commit to seeing a goal all the way through implementation, then that work is best handled bilaterally or in smaller collaborative arrangements outside of the PBRS' work plan. Independent review and expertise may help steer the next iteration of collaborative work towards simplicity and keep it rooted exclusively in what the five countries can best accomplish together.
- 1973 Agreement – Participants found the 1973 Agreement to be generally relevant and an important foundation to the conservation of a circumpolar species. Strengths of the Agreement include its terms of information exchange and transparency, its focus on harvest, and its unique role focusing on a circumpolar species and the implications that can have for environmental protection in an era of a rapidly changing climate. Weaknesses include the lack of inclusion of Indigenous Peoples in the initial drafting and signing of the Agreement and the absence or mention of collaboration around climate change. When asked about changing the Agreement, a few participants expressed deep concerns about the likelihood of being able to close the agreement again if it is opened for revisions—pointing to collaborative work under the CAP or a possible agreement amendment as vehicles for modernizing the PBRS frameworks without risking the existence of the original 1973 Agreement. Most participants advocated for finding meaningful and influential ways to address some of the Agreement's shortcomings through other means of organizing the work.

- Indigenous Involvement – Given the role Indigenous Peoples play in polar bear management across the Arctic and the centrality of harvest to the 1973 Agreement, participants emphasized the importance of engaging local communities in any forward collaborative action. As mentioned above, the topics of Indigenous Knowledge and Indigenous-led management surfaced frequently throughout this case study. See the following section for a full overview of that data.

Spotlight Topics

Throughout data collection, two topics repeatedly surfaced and earned a stand-alone section in this report. The following data suggests that these will remain key areas of focus and complexity for the PBRS in the years to come.

Indigenous Knowledge & Harvest

Indigenous Peoples across the Arctic have shared their lands with polar bears for millennia. For many Northern Indigenous communities, polar bears hold cultural, spiritual, and economic value. While not all PBRS countries overlap with Indigenous communities who engage in polar bear harvest, this topic—and the incorporation of Indigenous Traditional Ecological Knowledge (ITEK) of polar bears—appears top of mind for the PBRS and their conservation partners. I saw this theme across primary and supplementary data, from nearly every participant discussing harvest and Indigenous Knowledge in their interviews to the focus on Indigenous relationships at the 2023 MOP to documents and information on the PBRS' website regarding the establishment and work of the ITEK Working Group to.[13] The literature reflects the importance of this focus, showing that inclusion of social science fields in conservation planning, implementation, and management facilitates better conservation outcomes.[4, 18]

Knowledge System Conflicts – A dominant theme within these topics is the complexity of merging Indigenous and western knowledge, management techniques, and value systems. Most seem to agree this is a priority, but the road map for doing so is hazy. Tensions between these two world views arose repeatedly in conversations about changes to Nunavut's harvest ratio. Amongst interview participants and throughout observational data, there is a visible strain between the role an international body should play in harvest and locally or regionally led harvest management—especially with regards to threats of future sea ice loss on polar bear persistence.

Similar discord between knowledge systems surfaced in conversations about research techniques. Some Indigenous community members expressed concerns about the impacts of telemetry collars, telemetry ear tags, and immobilization drugs on polar bears. While less invasive research techniques—like biopsy sampling, aerial abundance surveys, and community-based monitoring—are becoming more common, mark-recapture is still widely used in polar bear research. As was pointed out during an exchange at the 2023 MOP, assurances from western scientists that these techniques do not have observable long-term effects often do little to address their incompatibility with the community's values. These instances highlight a significant challenge for the PBRS and conservation partners, where two knowledge systems are seeing the same thing but drawing different conclusions. Investing in the ongoing and progressive efforts of building a bridge between these conclusions and fairly weighting Indigenous values is essential work for the PBRS.

Balancing Knowledge Systems – Related to tensions between knowledge systems, supplementary data and a few interviewees mentioned the unequal weight given to western science over Indigenous Knowledge in the polar bear management and conservation community. Western science has received more attention and funding across the polar bear conservation regime timeline, a pattern acknowledged by the PBRS. While the PBRS are making efforts to recalibrate this balance, some participants emphasized the enormity of this gap and called for the PBRS to amplify its elevation of Indigenous Knowledge. Notably, these participants identified that not all countries in the PBRS seem to seriously value Indigenous Knowledge and suggested that the PBRS should, as much as possible, be on the same page with this topic—as it is part of an ongoing paradigm shift in how polar bears are understood and managed. While opinions are bound to differ between countries on any aspect of polar bear knowledge, this data suggests that the PBRS should engage in a long-term commitment to fostering a collaborative science-policy interface that shifts towards more equal production and incorporation of Indigenous Knowledge in decision-making structures.

Co-management Value – Finally, the data showed a hearty emphasis on prioritizing and respecting polar bear co-management systems. Multiple countries mentioned their local and Indigenous partners as their most important conservation partners and listed maintaining these partnerships as a top concern. Within co-management discussions, participants underscored the need for a more holistic perspective shift that relinquishes views of Indigenous Peoples as a group of people who are 'allowed' to hunt polar bears,

and rather acknowledges that Indigenous Peoples' hunting of polar bears plays a critical role in collecting important observations and conservation at large. In short, Indigenous Peoples should be valued as true partners and key contributors to polar bear conservation and polar bear knowledge.

Climate Change

Sea ice loss from climate change is the greatest threat to polar bears, and because global fossil-fuel emissions are to blame for a changing climate, it is a true international issue. While climate change was not identified as a threat in the drafting of the 1973 Agreement, the PBRS have made efforts to address climate in their last decade of collaboration. Across interviews, the complexity of this topic repeatedly surfaced. The work of the PBRS "to secure the long-term persistence of polar bears in the wild that represents the genetic, behavioral, life-history, and ecological diversity of the species" is tied to rectifying climate threats—yet these government bodies and their partners generally do not manage their country's energy and climate policies.[14] Several participants acknowledged this limitation and suggested that the PBRS' role is to "get the ball rolling" on climate action—which is currently being done through the creation and dissemination of standardized climate messaging. Still, these participants expressed feelings of hopelessness, despair, and existential dread regarding the future of polar bears at large. Other participants expressed a desire to see the PBRS take a more unified and bold approach to climate threats, serving as a unified voice on how climate inaction will impact polar bears and getting these messages in front of global decision makers. Even if the PBRS are limited in their abilities to influence primary climate drivers, the potency of this data is important—pointing to a need for the PBRS to keep an actively open-mind about ways the PBRS can engage in climate policy on an international stage.

Ultimately, these spotlight topics—ITEK, climate change, and harvest—are inextricably linked. Climate change, an issue created primarily by the western industrialized world, is the greatest threat to polar bears—yet it is the issue which is furthest from the PBRS' control. Sea ice loss from climate change is expected to result in polar bear population declines—impacting the overall number of bears available for harvest and possibly changing the calculations for what a sustainable harvest looks like.[10] Under healthy sea ice conditions, legal harvest is not a threat to polar bears.[16] In this way, climate change and harvest are at odds—with the latter being technically easier to regulate, but that

regulation is a threat to Indigenous rights and may be a band aid on the expanding wound of climate impacts on polar bears.

This dynamic is representative of a larger theme across the world where vulnerable communities—including Indigenous Peoples—who have historically contributed the least to climate change are disproportionately affected by it.[6] Climate change is a social justice issue because it "reflects and increases social inequality in a series of ways, including who suffers most from its consequences, who caused the problem, who is expected to act, and who has the resources to do so."[9] Navigating the intersection of these issues in a rapidly changing environment is and will continue to be a considerable hurdle for the PBRS and their partners.

Visual Overview of Qualitative Results – Key Findings, Research Question 3

*Figure 3: This word cloud highlights the dominant codes and concepts behind the key findings of Theme 4 under Research Question 3: "**How do CAP implementors perceive the usefulness of the plan, and what are their visions for the future of joint work in international polar bear conservation collaboration?"** The size of each concept in this word cloud corresponds to its frequency of occurrence across interviews. Purple words represent perspectives about future ways of organizing PBRS work, green words represent perspectives on Indigenous-related issues, and red words represent perspectives on climate-related issues. This visual represents the perspectives of 18 CAP implementors and is not meant to be interpreted as generalizable data.*

LIMITATIONS & VALIDITY

There were limitations to this study. Within the methods, I utilized both individual and group interviews. While this increased the number of people willing to participate, it is also important to acknowledge that these two methods may produce different qualities in data. For example, group interviews are more prone to group think—so while they offer the ability to collect more data from more people, they are also vulnerable to a certain amount of uniformity across answers.[2] I took care to weight contributions fairly, so as not to over-inflate focus group perspectives, but there are of course limits to this qualitative process. Interviews were conducted on zoom which, on the one hand, allowed for broader participation in a smaller timeframe—on the other hand, this can result in shorter interviews and more formality amongst the interviewees.[17]

In terms of representation, this study only included interviews with members of four out of the five PBRS. Some data from the fifth country was collected from supplementary public document review, but this does not offer insight into individual's experiences implementing the CAP and engaging in international collaboration. Additionally, given the prevalence of conversations regarding harvest and Indigenous Knowledge, this work and results would be strengthened by additional perspectives from Indigenous Peoples. Finally, 12 of the 18 total interview participants are currently employed by their national governments—positions that may have influenced candidness and the depth of information they were able to provide. Importantly though, this report was developed to be used, primarily, by these employees and their partners, so it was imperative that study outcomes be rooted in their experiences. The researcher's identity as a staff member of an environmental NGO may have influenced study representation and likely what the interview participants shared. For some participants, this identity may have generated early trust. For others, this identity may have limited interest in participating.

Language barriers may have also impacted the quality of data collected. All interviews were conducted in English, some with participants for whom English is their second language. The researcher is deeply grateful for these individuals' participation in English

and acknowledges the importance of learning from people in the language where they most freely express themselves. In the future, it would be important to work with translators, wherever possible, to give all participants an equal opportunity to share the details of their experience.

Validity Methods

This study employed two methods of validation to address these limitations and increase the usability of the research.

1. Data Triangulation – Data was triangulated through multiple avenues in this study. Firstly, interview data was gathered from a diverse range of participants—including government and non-government individuals across seven different countries, different specialties, and different implementation roles. Secondly, interview data was contextualized and supported by two secondary data sources: public documentation and meeting observation. Potential self-reporting bias in the document review and notes from the 2023 MOP was tempered by interview data—which, due to the study's strong commitment to anonymity, produced more candid and detailed information. Sample limitations in the interviews—including PBRS country representation and limited Indigenous voices—were tempered through the additional context provided in the public document review and notes from the 2023 MOP. During these meetings, all five PBRS country delegations gave presentations reflecting their international positions and domestic priorities, many presentations focused on incorporating Indigenous Knowledge into PBRS work, and there were numerous conversations about harvest and research techniques during open question sessions.[7]
2. Rich Data – Through conducting confidential interviews with participants, rich and detailed data was collected that revealed a more complete picture of the strengths and challenges of PBRS collaboration and the role CAP plays in their efforts. Participants agreed to be recorded in eight of the ten distinct interviews—allowing for the acquisition of verbatim transcripts, strengthening the richness of this data. For the two non-recorded interviews, extra time was taken for notetaking to capture as much detail as possible. The 2023 MOP offered some translation services so that some contributors could present in their native language—allowing for a second source of data across language barriers and countering some of that limitation in the interviews. The richness of these data sets provided a robust grounding upon which the study's final conclusions could be drawn.[7]

RECOMMENDATIONS

Based on analysis of these interviews, supported by secondary data, this research offers the following recommendations to the PBRS—for consideration during discussions about the next iteration of their work after CAP concludes in 2025:

1 **Simplify the PBRS' collective goals and work.**

Data across sources showed people placing value in the symbolic commitment of the five PBRS working together and a desire for some ongoing active international collaboration. Still, finding a composition of joint work that is meaningful and achievable is a challenge. Simplification of these efforts to better achieve this balance can happen on two levels: vision-setting and technical.

- Vision-setting – While the CAP was greatly simplified under the midterm review, data shows that its breadth may still be too broad for the capacity of the PBRS. In setting a vision for the next round of international collaboration—however that may look—the PBRS should take special care to define what success looks like for this body, not for polar bear conservation at large. Answer the question, "what can this group best accomplish?" Excluding an objective or action does not mean that it is unimportant or that someone else within the broader conservation sphere should not be working on it—it simply means, it may not be a good fit for this particular composition of people and countries. Selectiveness of this nature can be extremely challenging, given the importance of many conservation actions. Ultimately, the added complexity of including aspirational or unlikely-to-achieve efforts in joint work likely outweighs potential benefits. The PBRS can still be ambitious under a hyper-focused approach by getting very selective about where to channel that ambition.
- Technical – The PBRS can simplify their efforts with some tangible methods. Firstly, the direction of the midterm review and the role of the project officer have strengthened collaboration. Therefore, building on the midterm review's

momentum and continuing to invest in the project officer role is important for the PBRS' future success. Secondly, data showed that multiple participants felt that some of the reporting mechanisms and tools were too complex for the scale of this operation. Consequently, the group may benefit from exploring ways to simplify these processes. Thirdly, reducing the number of actions—and possibly objectives—will also be important in this simplification process. Many participants said there were too many actions, especially given limits in staff capacity. Fewer actions with achievable metrics may ease some strains caused by international collaboration. If any unimplemented actions or goals remain in the next iteration of the PBRS' work, the PBRS should carefully reflect on why they are carrying them forward and whether they are achievable. Finally, in the spirit of simplifying the vision, as described above, the PBRS' future work should only include goals that all five countries are committed to investing in at the international level. This means the PBRS will likely work on fewer topics together, but hopefully what they do work on will have the necessary infrastructure to be successful—including full follow through and implementation of a given effort.

2 Assign strong leaders and protect their time.

A majority of participants mentioned the tangible impact of strong leadership on successful implementation—be that from a HOD, working group lead, or action lead. Of course, staff capacity challenges and limited time frequently impact leadership competence. It is in the PBRS' best interest to promote intentional and strategic leadership selection for all subsidiary groups. Recognizing that government staff is often vulnerable to capacity issues, some leadership positions may be best distributed amongst other specialists. However, data showed that the PBRS would benefit from aligning on their values and boundaries with regards to the role non-government contributors play in supporting this internationally driven collaborative conservation work.

3 Commit to some in-person meetings.

In most interviews, participants mentioned the unique value of seeing international colleagues face-to-face. While remote work is essential to PBRS collaboration, the body should continue to strive to organize some meetings in-person. Benefits of these opportunities include increasing trust, creating space where international colleagues can speak more freely about sensitive topics, and decreasing the complexity of executing joint ventures. In-person gatherings can smooth some of the sharper, and more formal, edges that are characteristic of long-term, remotely

based collaboration. This research recognizes that COVID limited in-person meeting opportunities over the last few years.

4 **Maintain information sharing.**

The most frequently referenced benefit to international collaboration across interviews was the sharing of information between circumpolar colleagues. Participants made it clear that some form of international collaboration on polar bear conservation was important, and that no matter the shape these future efforts take, parties should strive to maintain open channels of information exchange—both formal and informal.

5 **Engage Indigenous partners early.**

Maintaining, strengthening, and expanding Indigenous contributions and collaboration is a clear priority of the PBRS—and central to objectives surrounding harvest and integration of Indigenous Knowledge. Any future configurations of this work should take care to communicate early with Indigenous partners about the conditions that will best support their sustained involvement. Investigate if there are ways to improve the structural inclusivity of future collaborative work—including, but not limited to, how meetings are run, how progress is tracked, and how knowledge is shared, responded to, and weighted.

6 **Consider other ways of structuring joint work.**

Given frequently referenced staff capacity issues, as well as challenges associated with merging local and international priorities, the PBRS could consider organizing a future version of this collaborative work through a combination of top-down and bottom-up implementation approaches—or locally led implementation of internationally set goals. In this format, the PBRS could define a set of goals that fit the criteria identified in recommendation #1 and then allow each country to determine how they will meet, or contribute to, those goals on a domestic level. The PBRS delegations could play a facilitation role, offering recommendations for domestic actions to meet the goals, organizing strategic workshops or meetings, and providing organizational support and tools. Such a system may help balance acquiring effective commitments from all parties without deterring participation in international collaborative efforts.[19] For the PBRS, this may also reduce work volumes for delegations while allowing for more diverse and regionally sensitive approaches to meeting international objectives.

7 **Add expertise to complex issues.**

Polar bear conservation intersects with many complex systems, including human rights, climate change, pollution, and global conflict. The PBRS are limited in their ability to thoroughly remedy any of these intersecting challenges, but that does not mean their contributions to the solutions are inconsequential. For example, there is no single, easy answer for merging Indigenous Knowledge and western science. Investing in relationships and equal conversation exchange, sharing ideas, and building trust is slow, essential work for a consequential and just outcome. Similarly, the PBRS are not going to single-handedly solve climate change, the greatest threat to the species they seek to preserve. Still the PBRS offer a unique perspective on climate impacts and, when operating as a united international body, have the gravitas to contribute to influential conversations and decision-making spaces regarding climate policy. When making decisions about whether the PBRS should endeavor to navigate these complex topics, possible guiding questions could be, "What would this landscape look like without PBRS' international collaboration? Is it better, worse, or the same?" Incremental change can often be unsatisfying in the face of urgent challenges, yet it is a meaningful and important part of systemic transformation and improving the odds for favorable conservation outcomes.

CONCLUSION

According to participants, this research highlights that there is value in some degree of international collaboration on polar bear conservation. The exact details of these efforts should repeatedly be evaluated and adapted, as they are heavily influenced by international politics, domestic dynamics, shifting conservation paradigms, and escalating environmental challenges.

As the PBRS reflect on the last nine years of CAP collaboration and look towards future efforts, this study's findings point to a period of simplified goals, ongoing information exchange, and expanded investment in relationship building and conservation partnerships. Polar bear conservation unfolds across many levels of social organization, each which hold unique opportunities and complexities. Strong and respectful relationships and regard for the worth of incremental change—even in the face of existential environmental challenges—are paramount to global conservation efforts.

To learn more about this research or to discuss its application to future collaborative efforts, please contact Emily Ringer at Polar Bears International.

Thank you for your attention and for your commitment to polar bear conservation.

Contact

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