

Circumpolar Action Plan Executive Summary

Conservation Strategy for the Polar Bear

September 2015

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Preface

The representatives to the Parties that are signatory to the 1973 *Agreement on the Conservation of Polar Bears*, that are collectively known as the Polar Bear Range States (Norway, Canada, Greenland, the Russian Federation and the United States), have a long record of cooperation on polar bear conservation. At the time the Agreement was signed, the most significant threat facing the polar bear was unregulated and unsustainable harvest, and populations in some areas were considered to be substantially depleted. Since that time, measures implemented by the Range States, such as controlled harvest management programs and the establishment of protected areas, have increased polar bear population sizes in those areas where unsustainable hunting was a problem prior to 1973.

Since 1973, however, the nature of the threats facing polar bears has changed. The world now faces what portends to be the greatest challenge to polar bear conservation in the history of the Agreement: human activities are changing the Earth's climate at an accelerating rate with ever greater risk to all ecosystems. One of the consequences of climate change is loss of sea ice habitat that polar bears depend on.

In its Fourth Assessment Report, published in 2007, the Intergovernmental Panel on Climate Change (IPCC) concluded:

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.... most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.

In its Fifth Assessment Report, published in 2014, the IPCC further stated:

Human influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes. This evidence for human influence has grown since AR4 [the Fourth Assessment Report]. It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.

Anthropogenic (or human-caused) climate change, and the associated loss and fragmentation of sea

ice habitats, threatens the long-term survival of the polar bear. Polar bears evolved in sea ice habitats over hundreds of thousands of years; as a result they are adapted to, and reliant upon, this habitat. While climate variability has been observed throughout the history of the planet, increasing atmospheric concentrations of greenhouse gases (GHGs) as a result of human activities mean that those fluctuations now occur over a higher and rising temperature baseline. Changes are taking place at a greatly accelerated rate, driven largely by anthropogenic warming caused by rising GHG emissions. At the same time, human populations and activities in the Arctic are increasing. In combination, these factors present new challenges for polar bear conservation. Although the current status of the world's polar bears is variable, scientists expect that negative effects will be increasingly common throughout the polar bear's range over the course of the 21st century. It is important to note that climate changes will also affect local, indigenous economies and cultures, as well as the goods, services and social benefits that humans are accustomed to receiving from ecosystems across the Arctic.

At their 2009 Meeting in Tromsø, Norway, the Range States agreed that the impacts of climate change and the continued and increasing loss and fragmentation of sea ice — the key habitat for both polar bears and their main prey species — constitute the most important threat to polar bear conservation. The Range States acknowledged with deep concern the escalating rates and extent of changes in the Arctic induced by climate change to date and noted that future changes are projected to be even larger. The Range States agreed that the long-term conservation of polar bears depends upon successful mitigation, or lessening, of climate change. To address the growing concern over climate change and a number of other emerging issues, the Range States agreed to develop a coordinated plan for polar bear conservation and management — a Circumpolar Action Plan: Conservation Strategy for Polar Bear.

Under this Circumpolar Action Plan, the Range States reaffirm their commitments under the Agreement and recognize that the polar bear is an indicator of the biological health of the Arctic ecosystem and a significant resource that requires additional protections. The Range States recognize that continued international cooperation is essential for the conservation of polar bears for future generations, and consider the Agreement to

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be the cornerstone and basis for this Plan¹. At the 2013 *International Forum on the Conservation of Polar Bears* in Moscow, Russia, representatives to the parties of the Agreement further reiterated these commitments in the Declaration of the Responsible Ministers of the Polar Bear Range States.



Henrik Hansen, Greenland

¹ While this Plan uses the 1973 Agreement as a point of departure, the Plan is not an authoritative interpretation of the 1973 Agreement and does not create rights or obligations under International law.

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In 1973, Canada, Denmark, Norway, the United States and the Union of Soviet Socialist Republics signed the *Agreement on the Conservation of Polar Bears* (hereafter, the Agreement). The representatives of the Parties (Canada, Greenland, Norway, Russia and the United States) note that at that time the largest threat to the polar bear (*Ursus maritimus*) was over-hunting, which had led to the severe depletion of some of the subpopulations within their range. As a result of coordinated international efforts and effective management actions by the Range States, polar bear numbers in some previously depressed populations have grown. In 2009, it was recognized by the Parties that a new and larger threat had emerged: climate change. This Circumpolar Action Plan (hereafter, the Plan) — a collaborative Range States initiative — provides a means of coordinating the management, research and monitoring of polar bear across its range and ensures that the Range States share common goals and approaches to conservation efforts. Recognizing the effective management systems already in place, the Plan focuses on issues that are best handled at the international or bilateral level.

While this first Circumpolar Action Plan is a 10-year plan, it will be revised and renewed as long as is needed. Progress of the Plan will be evaluated and made public every two years.

PLAN VISION AND OBJECTIVES

The overarching vision of the Plan is:

To secure the long-term persistence of polar bears in the wild that represent the genetic, behavioral, life-history and ecological diversity of the species.

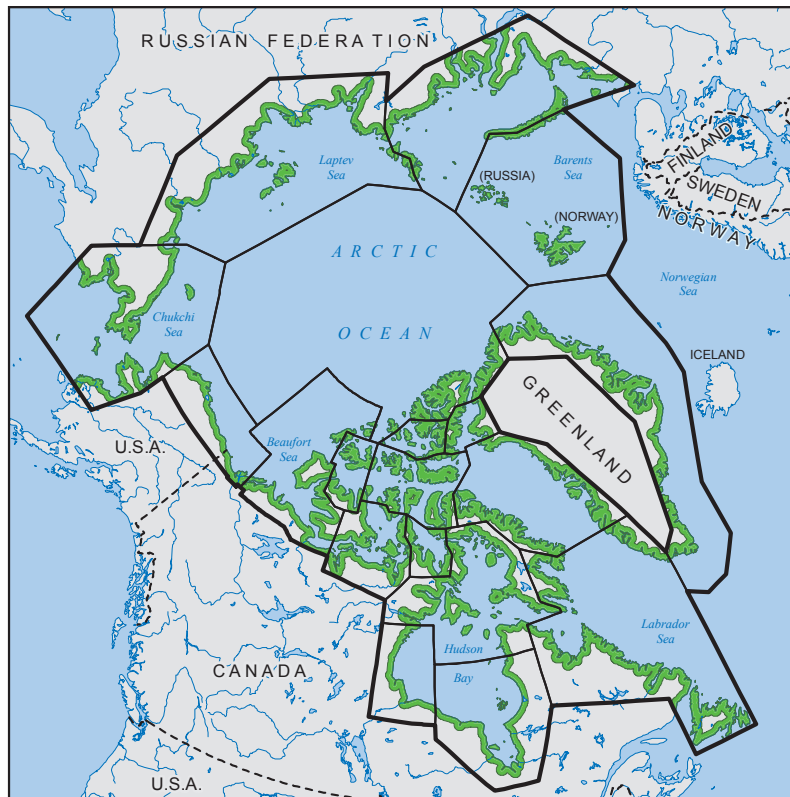
The vision reflects the Range States' position that polar bear conservation is a shared responsibility and that it is crucial for ecological reasons, and recognizes the importance of the polar bear to indigenous peoples of the circumpolar Arctic.

In order to realize the vision, the Range States have developed six key objectives:

1. *Minimize threats to polar bears and their habitat through adaptive management based on coordinated research and monitoring efforts, use of predictive models and interaction with interested or affected parties;*
2. *Communicate to the public, policy makers, and legislators around the world the importance of mitigating GHG emissions to polar bear conservation;*



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3. *Ensure the preservation and protection of essential habitat for polar bears;*
4. *Ensure responsible harvest management systems that will sustain polar bear subpopulations for future generations;*
5. *Manage human-bear interactions to ensure human safety and to minimize polar bear injury or mortality;*
6. *Ensure that international legal trade of polar bears is carried out according to conservation principles and that poaching and illegal trade are curtailed.*

SPECIES INFORMATION

Classified as *Vulnerable* on the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, the polar bear, the largest of the bear species, is a circumpolar ice-dependent mammal that has no natural predators. The world population estimate is 20,000–25,000 polar bears, occurring in 19 subpopulations (geographic areas) of varying discreteness, throughout the circumpolar region. Their range represents a total

land and marine area of approximately 23 million km².

The most carnivorous of all bear species, polar bears feed mainly on ringed seals but also hunt bearded, harp and hooded seals, as well as walrus. They are also known to scavenge on marine mammal carcasses, including whales, and will feed opportunistically on other food sources, such as bird's eggs. Most of a polar bear's life is spent on the sea ice. In areas where sea ice is seasonal, polar bears come ashore to wait until the ice forms in the fall and typically fast during this time. Pregnant females in most areas excavate dens in drifted snow banks on land, often close to shore, but are known to use multi-year pack ice in some regions of the Arctic, and may dig dens in frozen peat, and occasionally gravel, in discontinuous areas of permafrost.

The population growth potential of polar bears is typical of long-lived animals with slow reproduction cycles. Most males begin to breed at about eight-to-ten years of age, while females reach reproductive maturity at four-to-six years. Females typically have litters of one or two cubs, which, if they survive, are usually weaned around the age of two years. Few polar bears live longer than 25 years in the wild.

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THREATS TO POLAR BEARS

For the purpose of this Plan, the Range States agreed to consider actions which may be appropriate over the next 10 years. Seven key threats have been identified as already impacting, or most likely to have an impact on the polar bear and its habitat in the next 10 years. These threats need to be addressed within the next decade in order to avoid negative long-term effects to polar bears. These threats are: climate change, disease, human-caused mortality, mineral and energy resource exploration and development, contaminants and pollution, shipping, and tourism-related activities. The threats may interact and have compound effects, so the cumulative impacts will also be addressed in the Plan.

Climate change is the over-arching, long-term and most significant threat facing the polar bear. Projected warming over much of the polar bear's range and associated reductions in the extent and thickness of multi-year and annual sea ice will have both direct (e.g., habitat loss and degradation) and indirect (e.g., changes in prey availability) effects. Earlier melting of sea ice in the summer and later formation of sea ice in the fall will result in greater reliance on terrestrial coastal areas. Importantly, when and where climate change affects polar bear populations is expected to vary. Up-to-date information from scientific studies and other sources is necessary to understand this variation and develop effective conservation measures.

The occurrence of **disease and parasites** in polar bears is considered rare. However, with warming Arctic temperatures, the potential for widespread disease outbreaks exists, as does increased exposure and susceptibility to existing and new pathogens. Such impacts may be exacerbated as polar bears experience nutritional stress and given their relatively low levels of genetic diversity.

Total **human-caused mortality** (including legal harvest, poaching, human-bear conflicts, and polar bears killed as a result of other human activities) does not currently threaten the persistence of polar bears at the circumpolar level. Such removals could, however, become a threat to individual subpopulations if lethal take is unregulated or is not sustainable.

Increases in **mineral and energy resource exploration and development**, coupled with increases in shipping as a result of a longer open water season, increase the potential for oil spills in the Arctic marine environment. Polar bears are particularly vulnerable to oil spills as their

ability to thermoregulate would be affected by oiling. They may also be poisoned from ingesting oil when grooming or by eating contaminated prey. Although most exploration and mining in the Arctic to date has taken place inland (i.e., outside the normal range of the bears), many mining projects create infrastructure within polar bear habitats that has the potential to have a negative impact if not managed appropriately. As northern communities grow and industrial development increases, areas of interest to offshore hydrocarbon development and mining will occur in polar bear habitat, thereby increasing exposure to contaminants, pollution and human-bear interactions.

Contaminants and pollution from industrialized parts of the world reach the Arctic via both air and ocean currents. In some Arctic regions, top-level predators, like the polar bear, carry high contaminant loads. The presence of contaminants can adversely affect several physiological processes as well as endocrine, immune and reproductive systems which may impact bears at the individual and/or population levels. Being compromised in such a manner may further impede the polar bear's ability to respond to rising temperatures and shrinking sea ice habitat caused by a warming Arctic environment.

Loss of seasonal sea ice and the resulting increase in open water has led to an increase in **shipping** activities within the Arctic, and is expected to increase even more, given projections of an ice-free summer Arctic by 2020-50. Potential effects of shipping on polar bears include disturbance, increased fragmentation of sea ice habitat (from icebreakers), pollution, and the introduction of waste/marine litter, as well as an increase in human-bear encounters and corresponding risk of defence kills.

Effects as a result of **tourism and related activities** are expected to increase given expanded human presence in areas where polar bears exist. This includes increased traffic in prime polar bear habitat, potentially leading to increased human-bear interactions, and disturbance of denning females and females with dependent young.

MANAGEMENT REGIMES

Over the past 40 years, considerable progress has been made to establish domestic and inter-jurisdictional arrangements for polar bear research and management. An adaptive management approach is the cornerstone of these regimes, and ensures that decisions are continually

being updated as new information becomes available. Many of these arrangements have been formalized through both legally and non-legally binding instruments.

Across the circumpolar region, polar bears are managed on a subpopulation basis by governments. For subpopulations that extend beyond national jurisdictions into the high seas, international framework agreements provide some protection. For the subpopulations that transcend more than one country but remain within the exclusive economic zones of each country, bilateral agreements have been established in order to manage these shared populations.

National, state, provincial and territorial governments have established a number of protected areas of various types across the circumpolar region, many of which are situated within the range of polar bears, some of them beneficial to polar bears. Collectively, these designated areas serve to reduce the potential for adverse effects of industrial and other land use activities on polar bears.

According to the Agreement, polar bear management should be conducted in accordance with sound conservation principles based upon the best available scientific data. It should be noted that, the Range States recognize that indigenous peoples have acquired a wealth of knowledge (commonly referred to as Traditional Ecological Knowledge; TEK) about polar bears from centuries of living within the range of the species and its habitat. Their historic and current knowledge can contribute to effective polar bear management, and can make valuable contributions to scientific research and monitoring activities. In some countries, both science and TEK are considered equally in management decisions, in others TEK is considered in management decisions when scientific knowledge is lacking or non-existent and in others TEK may be considered when making scientifically based management decisions. In some polar bear areas there is no indigenous population and TEK is not a source of knowledge that can be considered in management decisions. Furthermore, the Range States recognize that the polar bear is important to Arctic indigenous communities and that their engagement in management and conservation is essential. Consequently, the Range States recognize that both science and TEK should be considered, where appropriate, in each of the strategic approaches identified by the Range States in order to address threats facing the polar bear.

STRATEGIES TO ADDRESS THREATS

Strategies that correspond to the seven key threats have been grouped into four strategic approaches: adaptive management, best management practices, monitoring and research, and communication and outreach. For each of these strategic approaches, actions which are considered important to support the key objectives of the Plan, and which would benefit from cooperation among the Range States have been identified. These actions are listed in the subsections below. The Range States will endeavor to collaborate on, and harmonize, activities and actions on the basis of this list. The list of identified actions is a framework with a time horizon of 10 years. More concrete implementation plans with priority actions for each subsequent two-year period will be agreed upon by the Range States biennially at the Meetings of the Parties to the Agreement.

Adaptive Management Approach

Adaptive management is a planned and systematic process for continuously re-evaluating management decisions and practices by learning from their outcomes and new knowledge. Assumptions can be tested and, if unanticipated adverse effects are detected, actions can be modified before the adverse effects take on major importance. Adaptive management is essential to planning and decision making for polar bear conservation and management throughout the circumpolar region, particularly in addressing the threats posed by climate change and the associated implications for habitat, prey abundance and availability, and disease.

ADAPTIVE MANAGEMENT ACTIONS

Take climate change effects into account in polar bear management:

- Consider the cumulative effects of climate change and human activities on polar bear subpopulations and habitats when making management decisions using tools such as predictive modeling.
- Investigate how climate change effects vary among subpopulations on both temporal and spatial scales and incorporate this knowledge into management actions.

Document and protect essential habitat:

- Identify essential polar bear habitat and redefine it as changes occur over time.

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- Disseminate essential polar bear habitat information broadly to Arctic communities and industries. Work with communities and industries to apply the appropriate habitat protection measures so that anthropogenic development and expansion do not adversely affect habitat.
- Conduct research into application of the concept of carrying capacity of polar bear subpopulations to polar bear management.

Consider the impact of diet changes:

- Identify and monitor changes in the availability and use of prey species and other food sources when making management decisions.
- Develop strategies for responding to the potential for large numbers of nutritionally-stressed bears being close to communities and consider the consequences including those for human safety and transmission of disease between bears.

Consider the current and future impacts of disease and parasites:

- Ensure that information on the impacts of disease and parasites in bears is considered when making management decisions.
- Communicate disease findings and predicted disease prevalence information, as well as provide guidelines for consumption of polar bear meat by people and sled dogs, as appropriate.

Best Management Practices Approach

Best management practices (BMPs) are methods, strategies or practices that have demonstrated effective results compared with other approaches, and are often therefore used as a standard. When used appropriately, BMPs will help to ensure that proposed activities are planned and carried out in compliance with applicable legislation, regulations, and policies and such that activities avoid, minimize and mitigate impacts to polar bears and their habitat. Developing, implementing and sharing BMPs has been identified as one of the strategic approaches that will address resource development, contaminants, tourism, shipping and human-bear interactions. The development of BMPs is also going to be the most effective way to consider work done by the Range States Trade Working Group.

BEST MANAGEMENT PRACTICES

- Identify additional BMPs that need to be developed, determine who is best positioned to develop them and support this action as appropriate.
- Examine the efficacy of BMPs as they relate to polar bear conservation and revise as appropriate.
- Consider and implement, as appropriate, recommendations from the Range States Trade Working Group.

Mineral and energy resource exploration and development:

- Assess the adequacy of existing oil and contaminant spill emergency response plans to protect essential polar bear habitat, and prevent polar bears from being exposed to oil.
- Work with appropriate authorities to develop the necessary emergency response plans.
- Provide guidance to the spill response authorities for the handling of bears that have come into contact with oil.
- Compile, and prepare as necessary, international, national, and local BMPs for mineral and energy exploration and development.
- Use regional land-use planning processes, regional strategic environmental assessments and project environmental assessments to mitigate the effects of mineral and energy development activities on polar bears.

Contaminants and pollution:

- Develop and implement BMPs or action plans to mitigate contamination, or debris, and their effect on polar bears in subpopulations where contaminants are a concern.

Tourism and related activities:

- Establish working relationships with tourism organizations.
- Collect occurrence data, and develop BMPs, with the goal of balancing needs of tourism-related activities and their impact on polar bears.

Shipping:

- Examine shipping routes in essential habitat and adjacent areas, and assess the threat posed

by expected activities over the next 10 years and identify appropriate responses, as required.

Human-bear interactions:

- Reduce the risk of injury and mortality to humans and bears as a result of their interactions by:
 - continuing to support the work of the Range States Conflict Working Group;
 - implementing and making available to all Range States the Polar Bear-Human Information Management System (PBHIMS);
 - developing and implementing appropriate data-sharing agreements among the Range States and making the data available to Range State management authorities;
 - entering all available data on human-bear interactions into the PBHIMS database on an ongoing basis;
 - developing BMPs on tools and techniques for use in preventing and mitigating human-bear conflicts.

Monitoring and Research

All jurisdictions have monitoring and research programs in place, some of which could benefit from enhancement and coordination at the bilateral and circumpolar levels.

MONITORING AND RESEARCH ACTIONS

Climate change research:

- Develop models to better understand the potential effects of climate change within



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the circumpolar region on polar bear subpopulations.

- Validate models based on empirical data and use them to identify high-priority information needs.
- Monitor and quantify changes in sea ice habitat for polar bears using satellite observations or other associated data.

Obtain information on all polar bear subpopulations:

- Develop subpopulation-specific research plans, which include *a priori* study design considerations, based on clearly stated objectives and applied conservation needs and in light of limited resources for research and variation in the ecological and management status of the 19 polar bear subpopulations.
- Share research plans among jurisdictions to encourage consistency of methods and data.
- Coordinate joint research studies of shared subpopulations and of adjacent subpopulations with significant movement of animals.
- Obtain population size estimates for all 19 subpopulations of polar bears according to the inventory schedule provided in this Plan (see Appendix V).
- Obtain information, where possible, on vital rates for all 19 subpopulations of polar bears. Improve methods to evaluate ecological indicators (e.g., reproduction) as proxies for robust estimates of vital rates.
- Improve methods to quantify and mitigate potential bias in estimates of population status and trend.
- Improve methods to use all available information to address management questions.
- Have the relevant scientific authorities conduct regular population assessments.
- Obtain TEK as per the acquisition schedule (Appendix VI) and consider, in conjunction with scientific data, in management decisions, where appropriate.
- Determine what kinds of TEK are most useful for conservation and management and develop objectives, guidelines, and standards for

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collection and reporting of such information to maximize its utility.

Prey abundance and other food sources:

- Evaluate the relationships between sea ice, prey abundance and distribution, and polar bear vital rates.
- Monitor abundance, availability and types of polar bear prey and analyze data for seasonal and regional characteristics and trends.
- Examine the importance of other food sources to the polar bear diet today and those anticipated over the next 10 years.
- Monitor the distribution and abundance of ringed seal over time and space.
- Monitor polar bear diets and nutritional status over time and space.
- Design studies to reassess areas with existing data for comparative purposes and to assess, at intervals, the effect of climate warming, changes in sea ice, and changes in oceanography that influence the prey species of polar bears.

Contaminants and pollution research:

- Compile the state of knowledge on (both global and local source) contaminants affecting polar bears and prey.
- Examine the impact of contaminants and pollution on polar bear life history characteristics.
- Where appropriate, monitor contaminants and pollution to determine temporal and spatial trends, modes of transmission etc.
- Investigate how contaminants interact in order to establish cause-and-effect relationships and assess the hazards from exposure to multiple contaminants.
- Periodically monitor for the presence of new contaminants/pollutants (i.e., those not previously detected in polar bear samples).

Disease research:

- Compile the current state of knowledge of how parasites and diseases affect polar bears.
- Establish sampling methodologies and common protocols to screen for relevant diseases/parasites, and monitor changes over time



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(recommended sampling period is every 10 years).

- Develop baseline occurrence estimates of identified diseases/parasites in each of the 19 subpopulations.
- Investigate the relationships between disease occurrence and changes to sea ice, feeding ecology, nutritional stress, contaminant exposure, etc.
- Measure the impact of diseases and parasites on polar bears at the individual and population level.
- Establish reference intervals for key biomarkers to monitor individual and population health.

Communications and Outreach

The communications and outreach strategy consists of both general and specific actions. Of the general actions, the development of a website for Range States as it relates to the Agreement and the Plan will be a foundational activity of core importance in facilitating the strategic approaches that are outlined in this Plan.

Specific action to reduce GHG emissions is outside the mandate of the Agreement and requires global action; therefore communications and outreach, coupled with results from monitoring and research, will be the main approach to raise awareness of the threat to polar bears from climate change and to encourage the global community to mitigate climate change.

COMMUNICATIONS AND OUTREACH ACTIONS

Website:

- Establish and maintain a Range States' website to disseminate information and provide links to relevant information sources.
- Produce biennial progress reports for release to the public (starting in 2017).

Targeted Outreach:

- Develop and implement a communications plan for outreach that includes regular information updates about the outcomes of this Plan.

Educational materials:

- Develop targeted educational material on BMPs (e.g., posters, fact sheets, website materials) for the shipping, mining and energy sectors and other industries to minimize their interactions with, and impacts on, polar bears.
- Develop educational material on polar bear biology and status, harvest management regimes, levels and control of international trade under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and other topics of interest for use in international forums.
- Use the PBHIMS database to produce safety education materials for use throughout the Arctic in order to minimize and mitigate human-bear interactions.

Communication on climate change:

- Develop and implement a communications strategy on climate change in order to bring global focus to the threat to the Arctic and to polar bears and the need for the global community to reduce GHG emissions.

Performance Measurements

The performance of the Plan will be measured using indicators for each level of the Plan. At the *vision* level, it is agreed that the best way to measure this overarching goal is in relation to the

distribution and abundance of polar bears through assessments of polar bear subpopulations.

At the *objectives* level, each objective has been associated with indicators formulated to describe a desired end-state. The measurement of these will determine the degree to which this end-state has been achieved.

1. *Minimize threats to polar bears and their habitat through developing, implementing and sharing adaptive management practices based on coordinated research and monitoring efforts, use of predictive models and interaction with interested or affected parties*

- Jurisdictions have developed and adopted adaptive management practices, and management decisions are re-evaluated as new information becomes available.
 - Human activities are planned and undertaken with consideration of potential impact on polar bears and their essential habitat, and appropriate monitoring and mitigation measures are implemented.
 - BMPs and guidelines have been developed and shared.
 - Methods and plans for coordinated range-wide monitoring and research have been developed and implemented, and information is shared.
2. *Communicate to the public, policy makers, and legislators around the world the importance of mitigating GHG emissions to polar bear conservation*
- The impacts of climate change on polar bears and the Arctic environment have been documented and communicated to relevant stakeholders and decision-makers.

• There is an increased awareness in the general public — both locally and globally — about the impacts of climate change on polar bear due to insights and information provided by the Range States as it relates to their cooperation on polar bear conservation.

3. *Ensure the preservation of essential habitat for polar bears*

- Essential habitat has been defined and identified within different subpopulations throughout the circumpolar range.

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- Localized areas of essential habitat to polar bears have been documented and reported to the Range States as they have become known.
- Essential habitat has been protected.
- 4. *Ensure responsible harvest management systems that will sustain polar bear populations for future generations*
 - Harvest management systems take long-term sustainability into account.
 - In subpopulations where there is harvest, it is deemed to be sustainable.
- 5. *Manage human-bear interactions to ensure human safety and to minimize polar bear injury or mortality*
 - Relevant information on human-bear interaction is collected and shared between Range States.
 - Communities and sites of human activity have developed and implemented polar bear management plans.
 - Bear deterrent training protocols have been established.
 - Incidents of human-bear interaction which end in injury or death (to bears or humans) has decreased.
- 6. *Ensure that international legal trade of polar bears is carried out according to conservation principles and that poaching and illegal trade is curtailed.*
 - International trade is carried out in compliance with CITES, and the number of violations has decreased.
 - The number of incidents of poaching has not increased.

On the level of *outputs of Plan actions*, each action point has been formulated to contain a deliverable it is set out to produce, which is the output of the action.

Performance Measurement Actions

- Regular reporting of the results of the Plan will be done according to Table 4. The reports will be made public.

- Biennial reviews will be made before each Meeting of the Parties, measuring progress on the action points.
- A more in-depth, mid-term review will be made after four years, measuring progress on the objectives.
- Baselines values for reporting on indicators at all levels will be presented prior to the biennial Meeting of the Parties in 2017.
- After the full 10-year period, a final report of results will be made, including an evaluation of the Plan, which will determine the need for renewal of the Plan.



Canada