CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Fifteenth meeting of the Conference of the Parties
Doha (Qatar), 13-25 March 2010

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

A. Proposal

Transfer from Appendix II to Appendix I of *Ursus maritimus* in accordance with Resolution Conf. 9.24 (Rev. CoP14), Annex 1, paragraph C) ii): A marked decline in the population size in the wild, which has been inferred or projected on the basis of a decrease in area of habitat and a decrease in quality of habitat.

B. Proponent

United States of America*

C. Supporting statement

1. Taxonomy

1.1 Class: Mammalia

1.2 Order: Carnivora

1.3 Family: Ursidae

1.4 Genus, species or subspecies, including author and year: *Ursus maritimus* (Phipps, 1774)

1.5 Scientific synonyms: *Thalarctos maritimus*

1.6 Common names: English: Polar bear

French: Ours blanc, Ours polaire

Spanish: Oso polar

Inuktitut: Nanoq

1.7 Code numbers: A-112.002.006.003

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* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat or the United Nations Environment Programme concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

2. Overview

Article II of the Convention text provides that Appendix I shall include all species threatened with extinction which are or may be affected by trade. The polar bear is affected by trade within the context of CITES. From 1992 through 2006, approximately 31,294 polar bear items, an average of 2,086 items annually, were exported/re-exported (see Section 6). Most of these items came from wild polar bears. In addition, most specimens originated from Canada. A total of 73 countries reported polar bear imports. Over time, trade in polar bears has increased (See Section 6).

The available information indicates that polar bears are threatened with extinction in accordance with biological criteria in Resolution Conf. 9.24 (Rev. CoP14), Annex 1, paragraph C) ii), due to a marked decline in the population size in the wild, which has been inferred or projected on the basis of a decrease in area of habitat and a decrease in quality of habitat.

Polar bears exist entirely in the circumpolar Arctic sea ice environment within five range States: Canada, Denmark (Greenland), Norway, Russian Federation, and the United States (DeMaster and Stirling 1981). Polar bears are completely dependent on sea ice, their habitat, which they use for hunting prey, reproduction and movement (Stirling 1998, 2006). Sea ice has been reduced by 8 percent in the past 30 years alone, while summer sea ice has been reduced by 15-20 percent (ACIA 2004b; Johannessen 2008). An additional decline of 10-50 percent of annual average sea ice extent is predicted by 2100 (IPCC 2007). A half dozen climate models, the best at predicting observed changes in sea ice to date, predict the complete loss of summer sea ice in the Arctic in about 30 years (Amstrup et al. 2007; Kerr 2009; but also see DeWeaver 2007 and Durner et al. 2007 about model uncertainty). In some locations where sea ice already completely disappears in summer — for example, the Canadian Arctic islands and Svalbard, northern Alaska and Russian Chukotka — use of land by polar bears is increasing (Schliebe et al. 2006). The amount of time on land is critical because polar bears are not able to capture normal prey items and are more likely to be killed by human hunters (Stirling and Derocher 2007). Some experts have concluded that polar bears will not survive due to the complete loss of summer sea ice (ACIA 2004a; ACIA 2004b; Derocher et al. 2004; Amstrup et al. 2007; Stirling and Derocher 2007; Amstrup et al. 2009).

Sea ice changes will likely negatively impact polar bears by increasing energetic demands of seeking prey. Remaining members of many populations will be redistributed, at least seasonally, into terrestrial or offshore habitats with marginal values for feeding, and increasing levels of negative bear-human interactions. Increasing nutritional stress will coincide with exposure to numerous other potential stressors. Polar bears in some regions already are demonstrating reduced physical condition, reduced reproductive success, and increased mortality. As changes in habitat become more severe and seasonal rates of change more rapid, catastrophic mortality events that have yet to be realized on a large scale are expected to occur.

The decrease in polar bear habitat – sea ice -- exacerbates all other potential threats to polar bear, including but not limited to, utilization and trade, disease or predation, contaminants, ecotourism, and shipping (see Section 5). Therefore, a precautionary approach, which includes polar bears in CITES Appendix I, is necessary to ensure that primarily commercial trade does not compound the threats posed to the species by loss of habitat.

3. Species characteristics

3.1 Distribution

The polar bear is found in the circumpolar Arctic marine environments of Canada (Manitoba, Newfoundland, Labrador, Nunavut, Northwest Territories, Quebec, Yukon Territory, Ontario), Denmark (Greenland), Norway (Svalbard), Russian Federation [North European Russia, Siberia, Chukotka, Sakha (Yakutia)], and United States (Alaska) (Figure 1; Amstrup 2003:587; Schliebe et al. 2006:10—12; Gunderson 2007).

3.2 Habitat

Polar bear habitat is sea ice occurring in the circumpolar Arctic marine environment including coastlines, and shallow and open seas. Polar bears occur most commonly on the annual ice over the continental shelf and inter-island archipelagos that surround the polar basin (Schliebe et al. 2006). Their range is limited by the southern extent of sea ice (NatureServe 2008).

Polar bears hunt throughout the year from sea ice, but in those areas where sea ice is absent during part of the year, they are forced to live on land and must fast using stored fat reserves (Schliebe et al. 2006). Because their principal habitat is the sea-ice surface rather than adjacent land masses, they are classified as marine mammals (Amstrup 2003:587).

3.3 Biological characteristics

Polar bears are the largest of the bear species, and the largest extant species in the Order Carnivora (DeMaster and Stirling 1981; Amstrup 2003:588). Adult males reach their maximum size at 8-14 years old; they measure 240-260 cm total length and usually weigh 400-600 kg, but some large males can weigh more than 800 kg. Adult females are smaller than males and reach adulthood at 5-6 years when they weigh 150-250 kg (Amstrup 2003; Derocher et al. 2005; Taylor et al. 2008a,b). Polar bears have a comparatively longer neck and smaller head than other bears (Stirling 1998, 2006). The skin itself is black (Amstrup 2003). Their feet are large, oar-like, and covered with fur on the underside (Stirling 1998, 2006). Their claws are shorter and more curved than those of brown bears and larger and heavier than claws of black bears (Amstrup 2003). Research into the relationship between changes in polar bear body size and shape within the context of environmental contaminants is underway (Gill 2009; Pertoldi et al. 2009).

Maximum life span is about 25 years for males and 30 years for females (Amstrup 2003:599). Age at first reproduction is 4-5 years for females and 8-10 years for males. Breeding occurs March-June, embryo implantation is delayed until autumn, and birth is believed to occur in November-January. Cubs are born in snow dens which are excavated by pregnant females located primarily on or along the coastline, but also within 10-20 km, or on fast sea ice (Armstrup 2003:596). Mortality of cubs is high, sometimes exceeding 70 percent. Maternal dens are occupied by females for 5-6 months, during which time females subsist on stored fat. Average litter size is less than two. Cubs, altricial at birth, are usually dependent on their mothers until they reach 2.5 years of age, but in less-productive areas they may stay with their mothers for up to 4.5 years (Amstrup 2003:588; Rode et al. 2007). Females normally reproduce every 3 years. A low reproductive rate, high cub mortality, and a long generation time contribute to the low reproductive potential of the species (Amstrup and Durner 1995; Schliebe et al. 2006).

Polar bears do not wander aimlessly on the ice, nor are they carried passively with the ocean currents (Armstrup 2003:592-593). Rather, linear movements and activity areas are very large compared to those of most terrestrial mammals (Bergen et al. 2007). Movement rates of > 4 km/hr and > 50 km/day have been observed. Annual activity areas by 75 females in the Beaufort Sea area, for example, were approximately 149,000 km^2, but ranged up to 597,000 km^2 (Armstrup 2003:593; Amstrup et al. 2000).

3.4 Morphological characteristics

Bears (Family Ursidae; three genera with eight species) are large mammals with a big head and thick neck, small eyes, rounded ears, and no facial vibrissae (Garshelis 2009:448; Krause et al. 2008). They have muscular bodies with stout legs, large paws, and a short tail. The genus *Ursus* has four species (*arctos, americanus, thibetanus*, and *maritimus*; Wilson and Reeder 2005:586-590). The polar bear taxon is not subdivided into subspecies. The body of a polar bear typically is stocky, but lacks a shoulder hump exhibited by *arctos* (DeMaster and Stirling 1981:1). Polar bears have a longer neck and smaller head than other ursids (Stirling 1998, 2006).

3.5 Role of the species in its ecosystem

Polar bears are the apex predator in the Arctic and the keystone species in their ecosystem (Amstrup 2003:591; NatureServe 2006; Schliebe et al. 2008). The main prey of polar bears is ringed seals (*Phoca hispida*) and, to a lesser extent, bearded seals (*Erignathus barbatus*; Amstrup 2003:591-592; DFO 2009). They also prey occasionally upon other locally available mammals, including seals and whales, as well as polar bear cubs. On land they may consume large ungulates, as well as birds. Polar bears are known to scavenge on whale carcasses, as well as eat berries, grass and kelp. As apex predators, loss of polar bears would have significant consequences to their ecosystem (ACIA 2004b; Polar Bear International 2009).

4. Status and trends

4.1 Habitat trends

Sea ice has been reduced by 8 percent in the past 30 years alone, while summer sea ice has been reduced by 15-20 percent (ACIA 2004b; Johannessen 2008). An additional decline of 10-50 percent of annual average sea ice extent is predicted by 2100 (IPCC 2007). Sea ice thickness in the Arctic region is also declining (Kwok and Rothrock 2009). Sea ice extent in the month of September (roughly equivalent to the annual minimum) has generally been declining since the late 1970s (Figure 2; Stroeve et al. 2007). Record retreats of sea ice were recorded in 2007 and 2008 and continued a 30-year trend (IUCN/SSC PBSG 2009l; Kerr 2009; Schiermeier 2009). A half dozen climate models, the best at predicting observed changes in sea ice to date, predict the complete loss of summer sea ice in the Arctic in about 30 years (Figure 3; Amstrup et al. 2007; Kerr 2009; but also see DeWeaver 2007 and Durner et al. 2007 about model uncertainty). In some locations where sea ice already completely disappears in summer — for example, the Canadian Arctic islands and Svalbard, northern Alaska and Russian Chukotka — use of land by polar bears is increasing (Schliebe et al. 2006). The amount of time on land is critical because polar bears are not able to capture normal prey items and are more likely to be killed by human hunters (Stirling and Derocher 2007).

4.2 Population size

There are presently believed to be between 20,000 and 25,000 polar bears in 19 putative populations (Table 1; Schliebe et al. 2006). While the overall population size estimate has varied little over the past 15 years, individual population estimates have become more precise (see progression of population size estimates in, for example, IUCN/SSC PBSG 1999; Lunn et al. 2002; Obbard et al. 2007; Regehr et al. 2007; Stirling et al. 2007). In 1993, for example, the total population estimate was 21,470-28,370 individuals (Wiig et al. 1995:24). A 20th polar bear population may occur in the central polar basin (Amstrup 2003:593).

4.3 Population structure

Adult males are generally solitary, while adult females travel with their cubs until they are about 2.3 years of age (Amstrup 2003:599). Polar bears are known to aggregate seasonally at some locations, such as Churchill (Mulvaney 2009). The sex ratio is roughly equal (Stirling 1998, 2006). Population genetic analyses from Hudson Bay, Canada, suggest a high level of gene flow among polar bear management units (Crompton et al. 2008). Predicted changes in the distribution and duration of sea ice in Hudson Bay, however, suggest that gene flow among these clusters may be reduced in the future. For most polar bear populations, information is largely unavailable on polar bear population size and structure, distribution, habitat use, and survival and breeding rates, but new technology, such as global positioning systems, increasingly are being incorporated into polar bear research (e.g., Marques et al. 2006).

4.4 Population trends

Given the extreme nature of the environmental conditions where the polar bear occurs, it is very difficult to characterize accurately the population status or trends (Derocher et al. 1998; Hunter et al. 2007; DeGange 2008). Over the past 30+ years, however, many field studies have enhanced our knowledge of polar bear population trends (e.g., Andersen et al. 2008; Aars et al. 2009). The number of polar bears, based on this research, is decreasing throughout their range (NatureServe 2008; Schliebe et al. 2006; Aars et al. 2006; IUCN/SSC PBSG 2009a,b,c).

The IUCN/SSC Polar Bear Specialist Group met in 2005 and evaluated the status of the polar bear (Aars et al. 2006:33-55). At that time: 2 populations of 19 were categorized as increasing, 5 as stable, 5 as declining, 6 as data deficient, and 1 unknown.

Polar bear species specialists met twice in 2009 and evaluated the latest population information: Meeting of the Parties to the 1973 Agreement on the Conservation of Polar Bears [Directorate for Nature Management (2009:31-32)] and IUCN/SSC Polar Bear Specialist Group 15th Meeting (IUCN/SSC PBSG Polar Bear Specialist Group 2009). Reviewing the latest

information available, the PBSG concluded that 1 of 19 subpopulations is currently increasing, 3 are stable and 8 are declining. For the remaining 7 subpopulations, available data were insufficient to provide an assessment of current trend. The total number of polar bears is still thought to be between 20,000 and 25,000, but based on this 2009 assessment, fewer populations are increasing or stable (4 populations of 19), while more populations are declining or data deficient (15 populations of 19).

In 2008, the IUCN listed the polar bear as Vulnerable based on IUCN criterion A3c based on a suspected population reduction of >30% within three generations (45 years) due to decline in area of occupancy, extent of occurrence and habitat quality (Schliebe et al. 2008). Some experts have concluded that polar bears will not survive due to the complete loss of summer sea ice (ACIA 2004a; ACIA 2004b; Derocher et al. 2004; Amstrup et al. 2007; Amstrup et al. 2009).

4.5 Geographic trends

Polar bears are distributed throughout the circumpolar basin with the southern extent of the distribution limited by the extent of Arctic sea ice. Because they derive their sustenance from the sea, the distribution of polar bears in most areas changes with the seasonal extent of sea-ice cover (Amstrup 2003:587).

5. Threats

Under CITES, a species may be considered to be threatened with extinction and meet the biological criteria for inclusion in Appendix I, if it can be shown to be experiencing a decrease in area of habitat or a decrease in quality of habitat. Polar bear habitat is both decreasing in area and quality. The decrease in polar bear habitat exacerbates all other potential threats, including but not limited to, utilization and trade (see Section 6), disease or predation, contaminants, ecotourism, and shipping.

5.1 Habitat area and quality

Polar bears have evolved in a sea ice environment that serves as an essential platform from which they meet life functions (Service 2008d:28275). As we indicated above in Section 4, status and trends for polar bear habitat and populations are not positive.

Polar bears currently are exposed to a rapidly changing sea ice platform, and in many regions of the Arctic already are being affected by these changes. While other species may respond to warming climates by shifting their distribution northward, polar bears cannot shift significantly northward, their physiology has a limited capacity to tolerate warm temperatures, and the warming climate is rapidly altering their habitat (Derocher et al. 2004). The long generation time and low reproductive rate of polar bears, and the rapid pace of sea ice loss, means that polar bears are not expected to be able to adapt in an evolutionary sense (Service 2008d:28239). Sea ice changes are projected to continue and positive feedbacks are expected to amplify changes in the arctic which will hasten sea ice retreat. These factors will likely negatively impact polar bears by increasing energetic demands of seeking prey. Remaining members of many populations will be redistributed, at least seasonally, into terrestrial or offshore habitats with marginal values for feeding, and increasing levels of negative bear-human interactions. Increasing nutritional stress will coincide with exposure to numerous other potential stressors. Polar bears in some regions already are demonstrating reduced physical condition, reduced reproductive success, and increased mortality. As changes in habitat become more severe and seasonal rates of change more rapid, catastrophic mortality events that have yet to be realized on a large scale are expected to occur. Observations of drownings and starved animals may be a prelude to such events. These changes will in time occur throughout the world-wide range of polar bears. Ultimately, these interrelated factors will result in range-wide population declines (Stirling and Derocher 2007). Populations in different ecoregions will experience different rates of change and timing of impacts. Within the foreseeable future, however, all ecoregions will be affected.

Based on the information available on polar bear habitat that indicate the current and projected effects of various factors, including climate change, on the quantity and distribution of polar bear habitat, the United States has determined that the polar bear meets the biological criteria for Appendix I [Annex 1; Conf. 9.24 (Rev. CoP14)].

5.2 Other Potential Threats

Utilization and Trade. The available scientific and commercial information on the utilization of polar bears for commercial, recreational, scientific or educational purposes indicates that harvest, increased bear-human interaction levels, defense-of-life take, illegal take, and take associated with scientific research live-capture programs are occurring for several populations. Loss of habitat will likely exacerbate the effects of utilization and trade habitat loss in several populations. In addition, polar bear mortality from harvest and negative bear-human interactions may in the future approach unsustainable levels for several populations, especially those experiencing nutritional stress or declining population numbers as a consequence of habitat change. The Polar Bear Specialist Group (Aars et al. 2006:57), through resolution (Res#1-2009: Effects of global warming on polar bears; IUCN/SSC PBSG 2009m), urged that a precautionary approach be instituted when setting harvest limits in a warming Arctic environment. Continued efforts are necessary to ensure that harvest or other forms of removal do not exceed sustainable levels.

Disease or predation. Disease pathogen titers are present in polar bears; however, no epizootic outbreaks have been detected (see Service 2008:28280-28281 and references included therein). In addition, forms of intra-specific stress and cannibalism are known to be manifested by bear species, including polar bears (Derocher et al. 2004; COSEWIC 2008). For polar bears, there is no indication that these stressors have operated to influence population levels in the past. Cannibalism is an indication of intra-specific stress, however we do not believe it has resulted in population level effects.

The available scientific information indicates that disease and predation (including intra-specific predation) do not threaten the species throughout its range. Potential for disease outbreaks, an increased possibility of pathogen exposure from changed diet or the occurrence of new pathogens that have moved northward with a warming environment, and increased mortality from cannibalism all warrant continued monitoring and may become more significant threat factors in the future for polar bear populations experiencing nutritional stress or declining population numbers.

Contaminants, Ecotourism, and Shipping. Contaminant concentrations are not presently thought to have population level effects on most polar bear populations (Service 2008:28288-28292 and references included therein). Increased exposure to contaminants, however, has the potential to operate in concert with other factors, such as nutritional stress from loss or degradation of the sea ice habitat or decreased prey availability and accessibility, to lower recruitment and survival rates that ultimately would have negative population level effects. Increasing levels of ecotourism and shipping may lead to greater impacts on polar bears (Andersen and Aars 2008). The potential extent of impact is related to changing sea ice conditions and resulting changes to polar bear distribution. These factors, particularly contaminants and shipping, may become more significant threats in the future for polar bear populations experiencing nutritional stress brought on by sea ice and environmental changes (Service 2008d:28280).

6. Utilization and trade

6.1 National utilization

The principle national use of polar bears in the United States, Canada, and Greenland is for subsistence purposes. Most polar bears are killed by indigenous people, and these hunts have an important cultural role (IUCN/SSC PBSG 2009b). Human subsistence use of polar bears include consumption of meat; use of hides in the construction of clothing such as mittens, boots (mukluks), fur ruffs for parkas, fur pants, and creation of handicraft items (Schliebe et al. 2006). Indigenous people also sell polar bear hides, skulls, and handicrafts made from polar bears. In Norway and Russia the commercial, subsistence, or sport hunting of polar bears is prohibited (IUCN/SSC PBSG 2009k). However, upon implementation of the bilateral agreement on Conservation and Management of the Alaska-Chukotka Polar Bear Population legalized hunting by native peoples in the Russian Federation will be allowed (see Section 7.2).

6.2 Legal trade

As the data for this section comes almost exclusively from the UNEP-WCMC CITES trade database, it must be noted that the database is based on annual reports of exporting and importing CITES Parties. Because of differences in how Parties report these data, and the challenges that arise from trying to compare different wildlife descriptions, units of measure, etc., it is very difficult to equate these data accurately to specific numbers of bears. In addition, the data depend on Parties' submissions of their CITES Annual Reports, and some countries have not submitted reports consistently or are several years behind in their submissions. Because of inconsistencies inherent in a database receiving information from many countries, which in turn receive information from many individuals, it is important to look at data from the CITES database as a useful point of reference across time and avoid the temptation to assign the data found in this dataset with greater specificity than they can support. We include these data in this proposal as it is the best dataset available on international trade in polar bears, and provides some indication of the magnitude of trade and trends in polar bear trade.

Data in the UNEP-WCMC CITES trade database are presented as "imports" and "exports/re-exports." In order to get a better understanding of exports, excluding re-exports, we tabulated polar bear range country export/re-export data that did not list a different country of origin than the range country of export.

To get a better idea of how trade may be affecting polar bears, in our data tabulations on exports, we only used trade data on bears that had been taken from the wild [i.e., we only used data with source code "W" (wild), except 16 entries which were coded as "U" (unknown) and 2 entries without source codes, where, to be precautionary, we assumed these 18 entries represented animals from the wild]. In our export/re-export tabulation, data from all sources were used.

From 1992 through 2006, approximately 31,294 polar bear items[1] (bodies, trophies, live animals, parts, pieces, or derivatives), an average of 2,086 items annually, were exported/re-exported (see Table 2). We estimate 21,506 of those items to be exports (excludes re-exports) derived from animals taken from the wild, an annual export of 1,434 items. Of the 21,506 items exported, 51% were exported from Canada, 31% from Greenland, 8% from Norway, 7% from the United States, and 3% from Russia. These items were imported by 73 different countries over the 15-year time-span, including Denmark (29%), the United States (19%), Japan (13%), Canada (11%), Norway (10%), Germany (4%), the United Kingdom (2%), Spain (1%), France (1%), Greenland (1%), Mexico (1%), and Sweden (1%). The remaining 7% of the items were imported by 61 other countries, and several data records were recorded as unknown for the importing country.

A CITES Appendix-I listing of the polar bear would essentially prohibit commercial trade in polar bears, including parts and products. As such, in order to get an idea of how such a listing would affect trade in polar bears, we analyzed "commercial" (purpose code "T") data separately from the non-commercial data [all other purposes codes, except "I" (illegal)]. Between 1992 and 2006, skins account for the majority (52%; n = 3,237) of items commercially exported. An average of 216 skins had been exported annually during this period. Of the 3,237 skins exported, 87% originated from and were exported from Canada, and 13% originated from and were exported from Greenland. Of the 3,237 skins exported, 58% were imported by Japan, 15% by Denmark, and 12% by Norway; the remaining 15% were imported by 37 additional countries.

In order to get a better understanding of the trade in "animals" rather than parts, pieces, derivatives, or products of animals, we combined and summarized data on "bodies", "live" animals, "skins," and "trophies." Although we recognize that some exports with the term "skins" could be incomplete skins, potentially resulting in the double-counting of animals, we note that "skin pieces" is a separate wildlife description available in the UNEP-WCMC CITES

[1] Note that in tabulating items, one data entry of 5kg of "hair" was counted as 1 item; three weight entries for "meat" were counted as 1 item each; entries of 1kg, 2kg, and 59kg of "skin pieces" were counted as 1 item each; "specimens" entries with the following weights and volumes were counted as 1 item each -- 10ml, 310ml, 1ml, 60ml, 40ml, 138ml, 248ml, 122ml, 186ml, 206ml, 5ml, 2100ml, 65ml, 90ml, 96ml, 50ml, 50ml, 2.7g, 10g, 50g, 10g, 10g; one 10g entry listed as "bodies" was assumed to be in error, and was counted under "unspecified" as 1 item; and three "specimens" entries of 1kg each were counted as 1 item each.

trade database called and so the data on "skins" is more likely to represent complete or almost complete skins. Nevertheless, due to this limitation in the data we have refrained from attempting to tabulate the number of animals exported. We have compiled the data on "bodies", "live" animals, "skins," and trophies," which are more likely to represent whole animals than other wildlife descriptions, such as meat, hair, bones, etc.

Data from the UNEP-WCMC CITES trade database indicate, based on a 3-year average of exports from 1992 through 2006, both commercial and non-commercial export of polar bear items in the combined "bodies", "live" animals, "skins," and trophies" category, have increased since the early 1990s (Figure 4). Skins represent 84% of the non-commercial data that generated the non-commercial trend line, with the remainder represented by bodies (13%), live animals (2%), and trophies (1%). In the same figure, skins represent 99% of the commercial data that generated the commercial trend line, with bodies, live animals, and trophies, combined representing 1%.

Our analysis above was restricted to polar bears and their parts originating from the wild, but an analysis of trade data with source codes "C" and "F" also provides an indication of how the trade in live polar bears may be affecting the population in the wild. Source code "C" refers to specimens bred in captivity in accordance with Resolution Conf. 10.16 (Rev.) and exported under the provisions of Article VII, paragraph 5, of CITES. Source code F refers to animals that are born in captivity, yet do not fulfill the definition of "bred in captivity" as per Resolution Conf. 10.16 (Rev.) (http://www.cites.org/common/resources/TradeDatabaseGuide.pdf). Based on data from the UNEP-WCMC CITES trade database, 308 live polar bears were exported/re-exported from 1992 through 2006. Of these 308 polar bears, 163 (60%) were bred in captivity or were captive-born (coded as either source code "C" or "F"). Of the 163 bears, 15% were coded as "F", while 85% were coded as "C."

6.3 Parts and derivatives in trade

Table 2 lists the polar bear items that are in trade. However, because the polar bear is listed in Appendix II, items that qualify as personal effects, such as handicrafts, do not require CITES export permits by the Parties that recognize the CITES personal effects exemption, these items may be under-represented here.

Based on export/re-export data from the UNEP-WCMC CITES trade database, of the 31,294 items in trade from 1992 through 2006, skin pieces were traded in the highest volume, followed by specimens, skins, claws, teeth, skulls, carvings, and bodies (Table 2). The vast majority of skin pieces (97%) were exported/re-exported for commercial purposes. Carvings and claws were exported/re-exported primarily (87% and 70%, respectively) as personal (recorded as source code "P") items. Specimens and teeth were exported/re-exported primarily (86% and 79%, respectively) for scientific purposes (purpose code "S"). Skulls were exported/re-exported primarily as hunting trophies (source code "H") (51%) and for personal use (38%). Of the 5,887 skins in trade, approximately 62% were exported/re-exported for commercial purposes, and 23% were exported/re-exported for personal use. Of the skins in trade, 14% (807) were exported/re-exported as hunting trophies (source code "H"), and of the 384 bodies in trade, 72% (277) were traded as hunting trophies (source code "H").

Based on data from the UNEP-WCMC CITES trade database, skins and skins pieces combined account for approximately 77% (n = 6,182) of the items exported commercially between 1992 and 2006, with skins representing (52%; n = 6,182) of the items exported commercially and skin pieces representing 25% (n = 6,182) of the items commercially exported.

6.4 Illegal trade

Based on export/re-export data from the UNEP-WCMC CITES trade database, between 1992 and 2006, only 4 items, skin pieces, were reported as "confiscated or seized (source code "I"). (Note: Items with source code "I" that had purpose code "E" (educational) were not counted. It should also be noted that most Parties do not report seizures in their CITES Annual Reports.)

Based on import data from this database, between 1992 and 2006, 74 items were reported as "confiscated or seized." Of these items, 9 had been traded commercially, and included plates,

skins, hair products, skulls, and bones. (Note: Items with source code "I" that had purpose codes "E" (educational) and "S" (scientific) were not counted.)

Poaching of polar bears is not thought to be a major concern throughout most of the polar bear's range (IUCN/SSC PBSG 2009b). However, there are concerns about high levels of poaching in the Chukchi/Bering Sea population in Russia (Belikov 2001), where several hundred bears may be killed illegally each year (Angliss and Lodge 2004; Angliss and Outlaw 2008).

Based on our range country consultations with Norway, confiscation by customs in Norway is rare and is approximately 1 rug per five years. Some of these confiscated rugs are of Russian origin (22 September 2009 email to P. Ward, USFWS, Division of International Conservation, from O. Storkersen, Directorate for Nature Management, CITES MA Norway).

6.5 Actual or potential trade impacts

Comments we received from the Marine Mammal Commission state that commercial hunting and use of polar bear skins have been prohibited throughout the polar bear's range since the 1973 Agreement on the Conservation of Polar Bears entered into force in 1976 (September 23, 2009, letter to R. Gnam, Chief, Division of Scientific Authority, USFWS, from T. Ragen, Executive Director, Marine Mammal Commission). However, as summarized above, based on data from the UNEP-WCMC CITES trade database from 1992 through 2006, an average of 216 polar bear skins have been traded annually for commercial purposes, and the level of commercial trade in skins has increased since the 1990s (Figure 4). Given the level of trade and trend in the trade of polar bear skins for commercial purposes, the polar bear clearly *is or may be affected by trade.*

Our consultation with the polar bear range country of Denmark has revealed the following: Greenland is an autonomous community within the Danish Realm; however, Denmark is a Member State to the European Union, and so EU CITES legislation applies to Denmark. At the February 29, 2008 meeting of the Scientific Review Group (SRG) of the EU, the SRG noted that Greenland would establish an export ban of polar bears by April 1, 2008. Greenland would no longer allow exports of polar bear specimens because the non-detriment finding could not be made by the Greenland CITES Scientific Authority. Therefore, no imports requiring CITES permits have taken place (except for scientific purposes) from Greenland to Denmark since the export ban was put into place (October 9, 2009, electronic mail to J. Jorgenson, USFWS, Division of Scientific Authority, from N. K. Nielsen, Ministry of the Environment, Danish Forest and Nature Agency), and our consultation with Greenland has confirmed the implementation of this ban (October 7, 2009, electronic mail to J. Jorgenson, USFWS Division of Scientific Authority, from F. Ugarte, Head of Department of Birds and Mammals, Greenland Institute of Natural Resources). Based on data from the UNEP-WCMC CITES trade database, from 1992 through 2006, Greenland exported 13% of the polar bear skins traded commercially.

At another SRG meeting on December 2, 2008, the SRG agreed to form a negative opinion on the Canadian polar bear subpopulations of Baffin Bay and Kane Basin, and a positive opinion for all other Canadian subpopulations. In 2008 and 2009, 16 skins for commercial use were imported into Denmark from Canada, as well as one hunting trophy (October 9, 2009, electronic mail to J. Jorgenson, USFWS, Division of Scientific Authority, from N. K. Nielsen, Ministry of the Environment, Danish Forest and Nature Agency). According to our range country consultation with Canada, the Canadian federal government, the Government of Nunavut, and the Government of Greenland are in the process of drafting a Memorandum of Understanding for the conservation and management of polar bears of the Kane Basin and Baffin Bay subpopulations. Furthermore, Canada is taking steps to address the harvest management concerns that led to the SRG decision to ban imports originating from these subpopulations (September 28, 2009, letter to R. Gnam, Chief, Division of Scientific Authority, USFWS, from B. van Havre).

Based on our range country consultations with Norway, exports and imports to and from Norway of polar bear rugs constitute solely specimens of Canada or Greenland origin, primarily of Canadian origin. Norway reports that these rugs are traded as tourist souvenirs. Import numbers from recent years include: 2005: 30 rugs; 2006: 40; and 2007: 41 (September

22, 2009, electronic mail to P. Ward, USFWS, Division of International Conservation, from O. Storkersen, Directorate for Nature Management, CITES MA Norway).

Based on our consultations with Canada, the annual mean international export for 2004 – 2008 is approximately 300 polar bears, and this includes hides and parts from Aboriginal and non-Aboriginal harvesters (September 28, 2009, letter to R. Gnam, Chief, Division of Scientific Authority, USFWS, from B. van Havre). This figure (300 bears) represents about 2% of the Canadian polar bear population (see Table 1). However, Canada noted that this level of export does not necessarily indicate level of harvest in a given year and stated that leading up to the polar bear's threatened listing under the U.S. Endangered Species Act, which banned polar bear trophy imports into the United States, there was a rise in exports of polar bears that had been harvested in previous years (September 28, 2009, letter to R. Gnam, Chief, Division of Scientific Authority, USFWS, from B. van Havre). Based on data from the UNEP-WCMC CITES trade database, from 1992 through 2006, Canada exported 87% of the commercially-exported polar bear skins, an average of 188 skins exported annually from Canada over the 15-year time-period.

7. Legal instruments

7.0 General

Regulatory mechanisms directed specifically at managing many of the potential threats to polar bears, such as overharvest or disturbance, exist in all of the countries where the species occurs, as well as between (bilateral and multilateral) range countries (Service 2008d:28281; see also Section 5.4, above, as well as Marine Mammal Commission 2004:77-81). In the case of the polar bear, national and international legal instruments are also guided by members of an advisory group.

IUCN/SSC Polar Bear Specialist Group: The Polar Bear Specialist Group (PBSG), formed in 1968, is not a regulatory authority nor do they provide any regulatory mechanisms. The PBSG, however, contributed significantly to the negotiation and development of the Agreement on the Conservation of Polar Bears (1973 Polar Bear Agreement), and has been instrumental in monitoring the worldwide status of polar bear populations. The PBSG operates under the IUCN Species Survival Commission (SSC) and meets periodically at 3-to-5 year intervals. At the 2009 PBSG working group meeting, there were status reviews for all populations given by their respective jurisdictions, as well as presentations on the status, management, and research of polar bears from all five nations (for additional information, see: http://pbsg.npolar.no/en/meetings/stories/15th_meeting.html).

Regulatory Mechanisms to Limit Sea Ice Loss: Although there are regulatory mechanisms for managing many of the potential threats to polar bears in all countries where the species occurs, as well as among range countries through bilateral and multilateral agreements, there are no known regulatory mechanisms that are directly and effectively addressing reductions in sea ice habitat at this time (Service 2008:28287).

7.1 National

Canada:

(a) Canada's constitutional arrangement specifies that the Provinces and Territories have the authority to manage terrestrial wildlife, including the polar bear, which is not defined as a marine mammal in Canada. The Canadian Federal Government is responsible for CITES-related programs and provides both technical and administrative support to the Provinces and Territories. Regulated hunting by aboriginal people is permissible under Provincial and Territorial statutes. Traditional knowledge about polar bears is being incorporated into some management plans (Tyrell 2006). For additional information, see Service (2008d:28215), COSEWIC (2002, 2008), Environment Canada (2009), Government of Canada (2009), Lunn et al. (2009), and Peacock et al. (2009).

(b) The Species at Risk Act (SARA; implemented in 2004) provides a number of protections for wildlife species placed on the List of Wildlife Species at Risk, or

"Schedule 1." Currently, under SARA, the polar bear is designated as a Schedule 3 species, "Species of Special Concern." A Schedule 3 listing under SARA does not include protection measures, whereas a Schedule 1 listing under SARA – being considered at this time for the polar bear (Lunn et al. 2009:19) -- may include protection measures for the polar bear and its habitat.

(c) There are several intra-jurisdiction polar bear agreements within Canada (Service 2008:28285-28286). Polar bears occur in 13 populations that lie within or are shared with the Northwest Territories or Nunavut. Although Canada manages each of the 13 populations of polar bears as separate units, there is a complex sharing of responsibilities (Government of Nunavut 2005; Thiemann et al. 2008). While wildlife management has been delegated to the Provincial and Territorial Governments, the Federal Government (the Canadian Wildlife Service of Environment Canada) has an active research program and is involved in management of wildlife population shared with other jurisdictions, especially one with other nations.

Denmark (Greenland):

Under terms of the Greenland Home Rule (1979), the Government of Greenland is responsible for management of all renewable resources, including polar bears (Service 2008:28287). Greenland is also responsible for providing scientific data for sound management of polar bear populations and for compliance with terms of the 1973 Polar Bear Agreement. Trophy hunting of polar bears is prohibited, but there are specific regulations that apply to traditional take within several protected areas. A preliminary meeting between Greenland Home Rule Government and the Government of Canada (with the participation of the Government of Nunavut) has occurred to discuss management of shared populations. For additional information, see: Born (2009) and Jessen (2009).

Norway:

(a) According to the Svalbard Treaty of February 9, 1920, Norway exercises full and unlimited sovereignty over the Svalbard Archipelago. Polar bears have complete protection from harvest under the Svalbard Treaty (Derocher et al. 2002b:75; cited by Service 2008:28287). Under Norwegian Game Law, all game, including polar bears, is protected unless otherwise stated (Derocher et al. 2002b:75; cited by Service 2008:28287). The main responsibility for the administration of Svalbard lies with the Norwegian Ministry of Justice.

(b) Approximately 65% of the land area of Svalbard is totally protected, including all major regions of denning by female polar bears (Service 2008:28287). Norway claims control of waters out to 200 nautical miles (nm; 370.4 km) and regards polar bears as protected within this area.

(c) In 2001, the Norwegian Parliament passed a new Environmental Act for Svalbard (Service 2008:28287). This act was designed to ensure that wildlife, including polar bears, is protected, although hunting of some species is allowed. The only permitted take of polar bears is for defense of life.

(d) In 2003, Svalbard designated six new protected areas, including the main polar bear denning area at Kong Karls Land (Service 2008:28287). For additional information, see: Directorate for Nature Management (2009) and Gerland (2009).

Russian Federation:

(a) Polar bears are listed in the second issue of the Red Data Book of the Russian Federation (cited by Service 2008:28286). The Red Data Book establishes official policy for protection and restoration of rare and endangered species in Russia. The main government body responsible for management of species in the Red Data Book is the Ministry of Natural Resources of the Russian Federation. Russia Regional Committees of Natural Resources are responsible for managing polar bear populations consistent with Federal legislation (Belikov et al. 2002:86).

(b) In the Russian Arctic, Natural Protected Areas (NPAs) have been established to protect marine and associated terrestrial ecosystems, including polar bear habitats (Service 2008:28286-28287). In May 2001, the Federal law "Concerning territories of traditional use of nature by small indigenous peoples of North, Siberia, and Far East of the Russian Federation" was passed and established areas for traditional use of nature (TTUN) within NPAs and other protected areas. The law "Concerning natural protected territories" (1995) regulates protection of plants and animals on the TTUNs. For additional information, see: Government of the Russian Federation (2009).

United States:

(a) Marine Mammal Protection Act of 1972, as amended (MMPA). The MMPA was enacted to protect and conserve marine mammals, including the polar bear, so that they continue to be significant functioning elements of the ecosystem of which they are a part (Service 2008d:28283-28284; National Marine Fisheries Service 1972, 1974; Service 1972). The MMPA places an emphasis on habitat and ecosystem protection. This act established a general moratorium on the taking and importing of marine mammals and a number of prohibitions, which are subject to a number of exceptions. Some of these exceptions include take for scientific purposes, for purposes of public display, for subsistence use by Alaska Natives, and unintentional incidental take coincident with conducting otherwise lawful activities. The interim final rule published in the Federal Register on May 15, 2008 (Service 2008e) addresses the ESA listing within the context of the MMPA. The Secretaries of Commerce and of the Interior have primary responsibility for implementing the MMPA.

(b) U.S. Endangered Species Act of 1973 (Act or ESA): On May 15, 2008, the polar bear was listed as threatened under this act meaning it is at risk of becoming an endangered species throughout all or a significant portion of its range (Service 2008d). The law provides civil and criminal penalties for actions that kill or injure bears and bars Federal agencies from taking actions that are likely to jeopardize the species or adversely modify its critical habitat. A special rule, also published on May 15, 2008, reconciled the several prohibitions and exemptions under the Act, CITES, and the MMPA (Service 2008e).

(c) Other domestic legislation: The **Outer Continental Shelf Lands Act of 1953 (OCSLA)** established Federal jurisdiction over submerged lands on the Outer Continental Shelf (OCS) seaward of the State boundaries (3 mile limit; 4.8 km). Implemented by the Minerals Management Service (MMS) of the Department of the Interior, the OCSLA does not itself regulate the take of polar bears, although through consistency determinations it helps to ensure that OCS projects do not adversely impact polar bears or their habitats. The **Oil Pollution Act of 1990** established new requirements and extensively amended the Federal Water Pollution Control Act to provide enhanced capabilities for oil spill response and natural resource damage assessment by the Service. The **Coastal Zone Management Act of 1972 (CZMA)** was enacted to "preserve, protect, develop, and where possible, to restore or enhance the resources of the Nation's coastal zone" (Service 2008:28284). This act provides for the submission of a State program subject to Federal approval and requires that Federal actions be conducted in a manner consistent with the State's CZMA plan to the maximum extent practicable. This act applies to polar bear habitats of northern and western Alaska, but does not itself regulate the take of polar bears. The **Alaska National Interest Lands Conservation Act of 1980 (ANILCA)** created or expanded National Parks and National Wildlife Refuges (NWR) in Alaska, including the expansion of the Arctic National Wildlife Refuge. One of the establishing purposes of the Arctic NWR is to conserve polar bears. The ANILCA does not itself regulate the take of polar bears, although through its designations it has provided recognition of, and various levels of protection for, polar bear habitat. The **Marine Protection, Research and Sanctuaries Act of 1972 (MPRSA)** was enacted in part to "prevent or strictly limit the dumping into ocean waters of any material that would adversely affect human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities" (Service 2008:28285).

For a more-detailed discussion of existing national laws that are relevant to polar bears or their habitat, see Service (2008d:28281-28288), as well as Haskett (2009) and Hepa (2009).

7.2 International

The polar bear is listed in Appendix II of CITES under the higher taxon listing of Ursidae. All range states are Parties to CITES and none has taken a reservation on this species listing.

Agreement on the Conservation of Polar Bears (1973): Canada, Denmark (on behalf of Greenland), Norway, Russian Federation, and the United States are parties to the Agreement on the Conservation of Polar Bears (1973 Polar Bear Agreement). The 1973 Polar Bear Agreement requires that all parties take appropriate action to protect the ecosystem of which polar bears are a part, with special attention to habitat components such as denning and feeding sites and migration patterns, and to manage polar bear populations in accordance with sound conservation practices based on the best scientific data.

Inupiat-Inuvialuit Agreement for the Management of Polar Bears of the Southern Beaufort Sea (1988): In January 1988, the Inuvialuit of Canada and the Inupiat of Alaska (United States), groups that both harvest polar bears for cultural and subsistence purposes, signed a management agreement for polar bears of the southern Beaufort Sea. This agreement, based on the understanding that the two groups harvested animals from a single population shared across the international boundary, provides a joint responsibility for conservation and harvest practices (Treseder and Carpenter 1989:4; Nageak et al. 1991:341; cited by Service 2008:28282). Provisions of the agreement include annual quotas, hunting seasons, and protection of dens.

Agreement between the United States of America and the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population: On October 16, 2000, the United States and the Russian Federation signed a bilateral agreement for the conservation and management of polar bear populations shared between the two countries. Article 7 of the Bilateral Agreement provides that"[n]othing in this Agreement is intended to authorize the taking of polar bears for commercial purposes, or to limit the ability of native people, consistent with the domestic law of the Contracting Parties, to create, sell, and use traditional articles associated with native harvest of polar bears." It also commits the parties to the conservation of important polar bear habitats. The first meeting of the U.S-Russia Polar Bear Commission took place in Moscow on 23-25 September, 2009. The Commission developed the structure of a Scientific Working Group, which shall assist the Commission in resolving questions pertaining to the protection and management of the Alaska-Chukotka polar bear population.

For a more-detailed discussion of existing international laws that are relevant to polar bears or their habitat, see U.S. Department of the Interior (Service 2008d:28281-28288) and IUCN/SSC SSC PBSG (2009d,k; see: http://pbsg.npolar.no/en/agreements/).

8. Species management

8.1 Management measures [see Derocher and Stirling (2009) for a general summary, as well as IUCN/SSC PBSG 2009d]

In Canada, polar bears are managed by the Federal Government, three Territories and four Provinces which form management committees (Lunn et al. 2009; Peacock et al. 2009). The quotas for each jurisdiction are based on recommendations of the committees. There are co-management boards for most polar bear populations which allow management changes to be based not only on scientific data, but also traditional knowledge. Sport hunted polar bears taken as trophies come from a quota assigned to a community so that the community receives the share of financial returns that is not retained by booking agents. Polar bear management measures were most recently assessed in 2008 (COSEWIC 2008).

In Greenland, a quota system came into force on January 1, 2006 (prior to this there were no hunting quotas) (Schliebe et al. 2006). Beginning on April 1, 2008, Greenland placed a

temporary ban on the export of polar bear products due to a negative non-detriment finding (Born and Ugarte 2007; Government of Greenland 2008).

Norway has banned polar bear take in the Svalbard Archipelago since 1973 (Aars et al. 2006).

In the Russian Federation, polar bear hunting has been banned since 1956 (Belikov et al. 2002). A recent agreement between Russian Federation and the United States will allow for legalized hunting by native peoples in the Russian Federation.

In the United States (Alaska), a conservation plan for the polar bear was initiated in 1994 (Service 1994). In 2007 at Shepherdstown, West Virginia, representatives of the several range states met to discuss polar bear conservation and management issues (Service 2007b). Native subsistence hunting today is allowed without a quota.

For a complete discussion of existing management measures that are relevant to polar bears or their habitat, see Service (2008d:28212-28234).

8.2 Population monitoring

The quality and quantity of population data are highly variable between polar bear populations. Of the 19 known populations of polar bears, population monitoring – according to the IUCN/SSC PBSG -- is considered to be "poor trend data" for 11 populations (East Greenland, Kara, Laptev, Chukchi, Viscount Melville, Norwegian Bay, Gulf of Boothia, Foxe Basin, Kane Basin, Davis Strait, and Arctic Basin), "fair trend data" for 8 populations (Barents, N. Beaufort, Lancaster Snd., M'Clintock, S. Hudson Bay, and Baffin Bay), and "good trend data" 2 populations (S Beaufort and W Hudson Bay) (Derocher and Stirling 2009). In some areas population surveys occur so infrequently – for example, 10-15 years -- that there is concern that unsustainable harvest levels could occur and remain undetected before the next survey is made (IUCN/SSC PBSG 2005, 2009b).

8.3 Control measures

8.3.1 International

The Agreement on the Conservation of Polar Bears prohibits the commercial use of skins and other items of value resulting from taking for "conservation purposes" or to "prevent serious disturbance to the management of other living resources." Other forms of permissible take, however, are not covered by this prohibition. The import and export of polar bear specimens is addressed under the Agreement between the United States and the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population.

8.3.2 Domestic

See Section 7.1 for information on legal instruments as they relate to controls and polar bear species management in the range States aimed at ensuring sustainable take from the wild.

8.4 Captive breeding and artificial propagation

Based on data from the UNEP-WCMC CITES trade database, 308 live polar bears were exported/re-exported from 1992 through 2006. Of these 308 polar bears, 163 (60%) were bred in captivity or were captive-born (coded as either source code C or F). Of the 163 bears, 15% were coded as F, while 85% were coded as C.

8.5 Habitat conservation

The threat with the most serious impact on polar bear habitat is climatic warming which is causing a reduction in sea ice (ACIA 2004a; ACIA 2004b; Derocher et al. 2004). There are no known regulatory mechanisms in place at the national or international level that directly and effectively address the primary threat to polar bears—the rangewide loss of sea ice habitat (Service 2008d:28293).

8.6 Safeguards

Several organizations (primarily State and Federal) and ongoing activities provide an opportunity to safeguard species management for polar bears. The IUCN SSC Polar Bear Specialist Group (regularly scheduled meetings as well as outreach instruments), for example, as well as bilateral agreements and multilateral agreements (discussed elsewhere in this proposal) have regularly scheduled meetings between the Parties to discuss polar bear conservation and management issues. At the local or community level, polar bear populations are monitored for a variety of reasons, including for ecotourism activities and subsistence hunting. Several conservation non-governmental organizations also promote the conservation status of the polar bear through their support of plant and wildlife research projects and environmental education activities. Collectively, these mechanisms help safeguard polar bear populations.

9. Information on similar species

The polar bear is the only all-white bear (except for the eyes, as well as black lips, skin, nose, and footpads). (Polar bear fur actually is transparent and reflects the color of the surrounding ice and snow.) Furthermore, there are no other large, all-white mammals (except for albino individuals). It is reasonable to expect an informed non-expert to be able to make a firm identification of essentially complete or intact specimens (e.g., rugs and trophies), while parts and derivatives of polar bears in trade (e.g., claws, teeth, and skulls) may be confused with those of other bears.

For additional information about similar species, see: Family Ursidae General Notes (CITES Identification Manual; Code A-112.002.000.001; Macey et al. 1982); Family Ursidae Identification Aids: Bear Heads (Code A-112.002.000.002); Bear Feet (Code A-112.002.000.003); Bear Claws (Code A-112.002.000.004); Bear Pelts(Code A-112.002.000.005); Bear Skulls (Code A-112.002.000.006)

10. Consultations

Five range States: Canada, Denmark (Greenland), Norway, Russian Federation, and the United States. By a combination of fax, electronic mail, and letter (overnight mail; courier), the Government of the United States on August 18, 2009, submitted consultation letters to the CITES Management and Scientific Authorities of all five range states, as well the Government of Iceland. At that time, we indicated that the Service, on behalf of the US Government, was contacting them to consult on a possible proposal for submission to CoP15.

Canada: By letter dated September 28, 2009, the Government of Canada provided information about the conservation status of the polar bear in that country and the several management programs that are being implemented there. In conclusion, Canadian officials indicated: "International trade is itself not a threat to the species' population. Any polar bear from Canada found in legal international trade will have been legally harvested in Canada. A sustainable and well-managed hunt is an important part of a conservation plan. An outright ban on trade will have no impact on quotas, but it might have a negative impact on conservation."

Denmark (Greenland): By electronic mail dated October 7, 2009, the Government of Greenland (Greenland Institute of Natural Resources; CITES Scientific Authority) provided information about ongoing polar bear projects that were underway in that country. They indicated that the export of polar bear products from Greenland was banned shortly after the issuance of a negative non-detriment finding in 2007 (Born and Ugarte 2007). In addition, they clarified that the relevant authority regarding management of polar bears is the Department of Fisheries, Hunting and Agriculture (APNP), while the export of polar bear products is administered by the Department of Internal Affairs, Nature and Environment (NNPAN). No comments were made regarding a possible proposal for submission to CoP15.

By electronic mail dated October 9, 2009, the Government of Denmark indicated that Greenland was an autonomous community within the Danish Realm and that CITES matters (including polar bear issues) in Greenland were handled by the Greenland Self Government. Reference was also made to the Scientific Review Group (SRG) of the European Union (EU). On February 29, 2008, according to this response, it was decided that all import permit requests for polar bears exported from Greenland to the EU should be referred to the SRG for evaluation. On December 2, 2008, it was decided that

Canadian polar bear populations at Baffin Bay and Kane Basin would be subject to a negative non-detriment finding, while all other Canadian polar bear populations would be subject to a positive non-detriment finding. Trade data for 2008-2009 were provided (0 specimens from Greenland and 1 trophy and 16 skins from Canada). No comments were made regarding a possible proposal for submission to CoP15.

Norway: By letter dated September 22, 2009, the Government of Norway provided information about the conservation status of the polar bear in that country and the several management programs that are being implemented there. In conclusion, Norwegian officials indicated: "In the case of polar bear the projected reduction of ice coverage could lead to a future decline. The question here seems to be whether there is a decline or likely to be a decline, and whether this is outside normal fluctuation. In addition, it should also be noted that Appendix I requires the population to be threatened with extinction. To support the proposal it is vital to have information on past and present populations. Polar bears are at present on Appendix II and consequently under trade monitoring. The CITES Parties can also use the option of recommending a zero quota if continued trade is documented to affect the population negatively. The polar bear also has its own agreement (established 1973). We think it would be helpful if this agreement gave a recommendation on this issue."

"To conclude, Norway has increased its monitoring activities for polar bear and walrus. We will contribute to the future debate to conserve these species. Both species are partly marine species and we expect that the expert panel of the FAO will include these species in their evaluation of all marine listing proposals prior to the next CITES CoP. The advice of the expert panel will be vital for our final position on the proposals. At present, we are inclined to think it is premature to uplist the polar bear."

Russian Federation: No written response had been received as of October 13, 2009, but by telephone, Ms. Elena Kaliberda (Deputy Director, Department of International Cooperation, Ministry of Natural Resources and Environment of the Russian Federation [MinPrirody] indicated that our letter had been received and was being reviewed. A preliminary recommendation made by officials of the All-Russia Scientific Research Institute did not support an Appendix I listing for polar bears on the grounds that the hunting of that species is prohibited in Russian and that a network of protected areas helps to conserve the species in that country. A final decision has yet to be made, but a written response will be returned at a later date.

11. Additional remarks

None.

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Table 1. Population Status Table
[Sources: Directorate for Nature Management (2009); IUCN SSC Polar Bear Specialist Group (2009a,c)]

Population (abbreviation; see Figure 1)	Abundance Estimate (individuals)	Year of Estimate	Annual Kill (5-year mean)	Trend	Status	Estimated Risk of Future Decline
East Greenland	Unknown	----	70	Data deficient	Data deficient	No estimate
Barents Sea	2997	2004	No catch	Data deficient	Data deficient	No estimate
Kara Sea	Unknown	----	n/a	Data deficient	Data deficient	No estimate
Laptev Sea	800-1200	1993	n/a	Data deficient	Data deficient	No estimate
Chukchi Sea	2000	1993	n/a	Data deficient	Data deficient	No estimate
Southern Beaufort Sea (SB)	1600	2006	61	Declining	Reduced	No estimate
Northern Beaufort Sea (NB)	1200	1986	38	Stable	Not reduced	No estimate
Viscount Melville Sound (VM)	161	1992	4	Increasing	Severely reduced	Very low
Norwegian Bay (NW)	190	1998	3	Declining	Not reduced	Higher
Lancaster Sound (LS)	2541	1998	72	Stable	Not reduced	Higher
M'Clintock Channel (MC)	284	2000	7	Increasing	Severely reduced	Very low
Gulf of Boothia (GB)	1523	2000	39	Stable	Not reduced	Lower
Foxe Basin (FB)	2197	1994	97	Stable	Not reduced	Lower
Western Hudson Bay (WH)	935	2004	47	Declining	Reduced	Very high
Southern Hudson Bay (SH)	1000	1998	39	Stable	Not reduced	Lower
Kane Basin (KB)	164	1998	10	Declining	Reduced	Very high
Baffin Bay (BB)	2074	1998	190	Declining	Reduced	Very high
Davis Strait (DS)	1650	2004	65	Data deficient	Data deficient	Lower
Arctic Basin	Unknown	----				

Table 2. Legal Trade in Polar Bear Items[1] by Item Description, 1992–2006

	All Exports and Re-exports		Exports[2] recorded as Wild[3]	
Item Description	**Annual**	**Total**	**Annual**	**Total**
Skin pieces	512	7683	120	1807
Specimens	464	6966	312	4678
Skins	393	5887	359	5387
Claws	236	3546	235	3532
Teeth	157	2360	138	2071
Skulls	100	1498	99	1480
Carvings	85	1268	84	1265
Bodies	26	384	24	362
Bones	25	372	23	348
Live	21	308	4	58
Unspecified	7	109	7	101
Trophies[4]	5	73	3	42
Hair	50	755	21	316
Garments	2	31	<1	9
Gall bladders	1	15	1	15
Bone pieces	<1	7	<1	7
Skin/leather items	<1	6	<1	6
Small leather products	<1	5	<1	3
Skeletons	<1	5	<1	5
Hair products	<1	4	<1	4
Feet	<1	3	<1	3
Meat	<1 (2,767g)	3 (41,500g)	<1 (2,767g)	3 (41,500g)
Genitalia	<1	2	<1	2
Plates	<1	2	0	0
Tusks	<1	2	<1	2
Total	2,086	31,294	1,434	21,506

[1]Note that in tabulating items, one data entry of 5kg of "hair" was counted as 1 item; three weight entries for "meat " were counted as 1 item each; entries of 1kg, 2kg, and 59kg of "skin pieces" were counted as 1 item each; "specimens" entries with the following weights and volumes were counted as 1 item each -- 10ml, 310ml, 1ml, 60ml, 40ml, 138ml, 248ml, 122ml, 186ml, 206ml, 5ml, 2100ml, 65ml, 90ml, 96ml, 50ml, 50ml, 2.7g, 10g, 50g, 10g, 10g; one 10g entry listed as "bodies" was assumed to be in error, and was counted under "unspecified" as 1 item; and three "specimens" entries of 1kg each were counted as 1 item each.

[2]Export figures are based on WCMC "export/re-export" entries in which the polar bear range country of export did not list a different country of origin than the range country of export.

[3]All export data used had source code W, except 16 entries which were coded as "U" (unknown) and 2 entries without source codes. These entries are assumed to be from the wild.

[4]Note that the data in this table associated with "trophies" refers to the item description, not the purpose code "H" (hunting trophies). For example, of the 5,887 skins reported by this table, 807 are recorded as source code "H" (hunting trophies), and of the 384 bodies, 277 are recorded as source code H. The purpose of this table is to show the types of items in trade, not the purpose of the trade.

Source: Data from UNEP-WCMC CITES trade database 1992-2006.

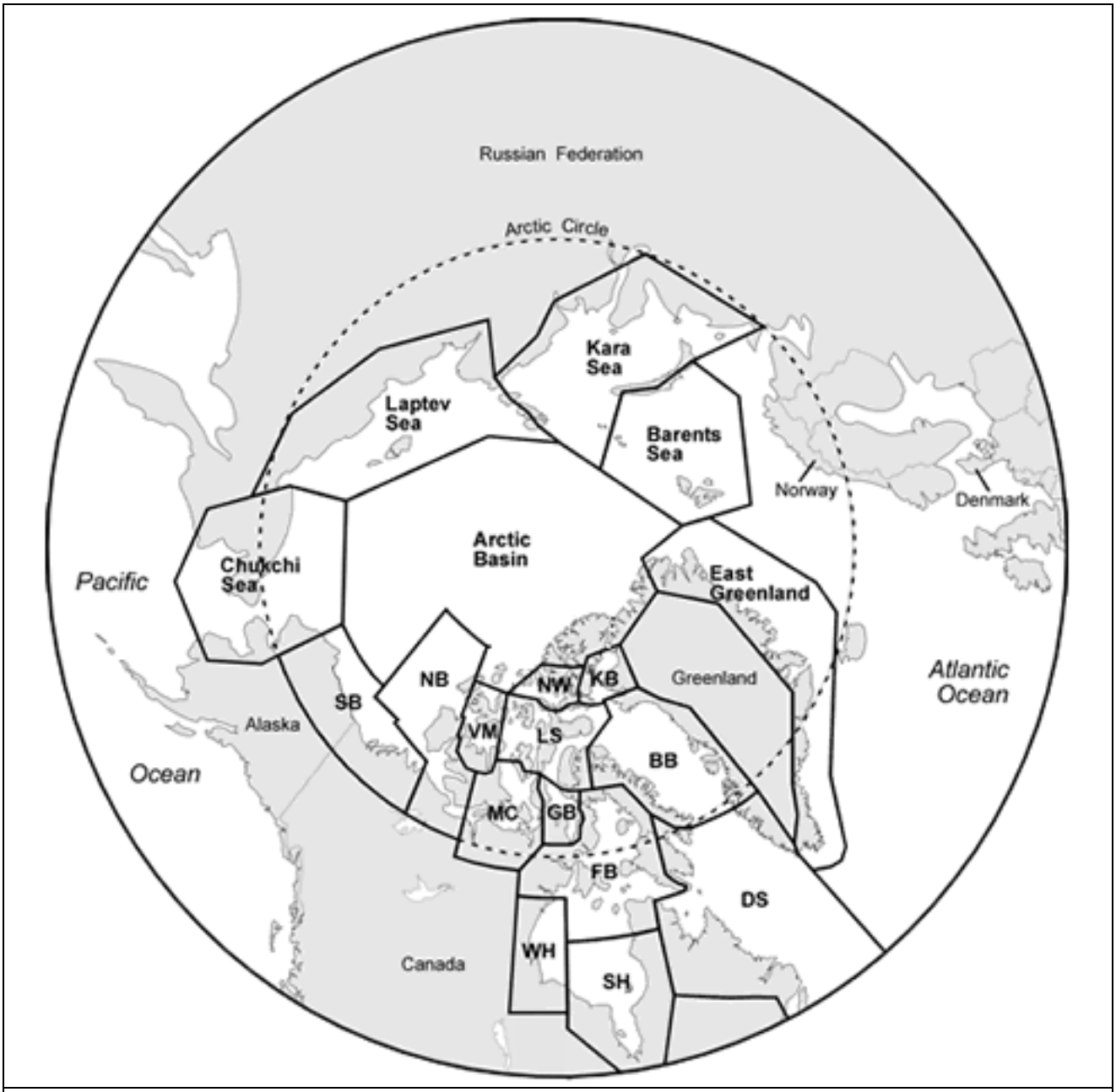

Figure 1. Polar bear population map
[Source: Directorate for Nature Management (2009); see table for key to abbreviations]

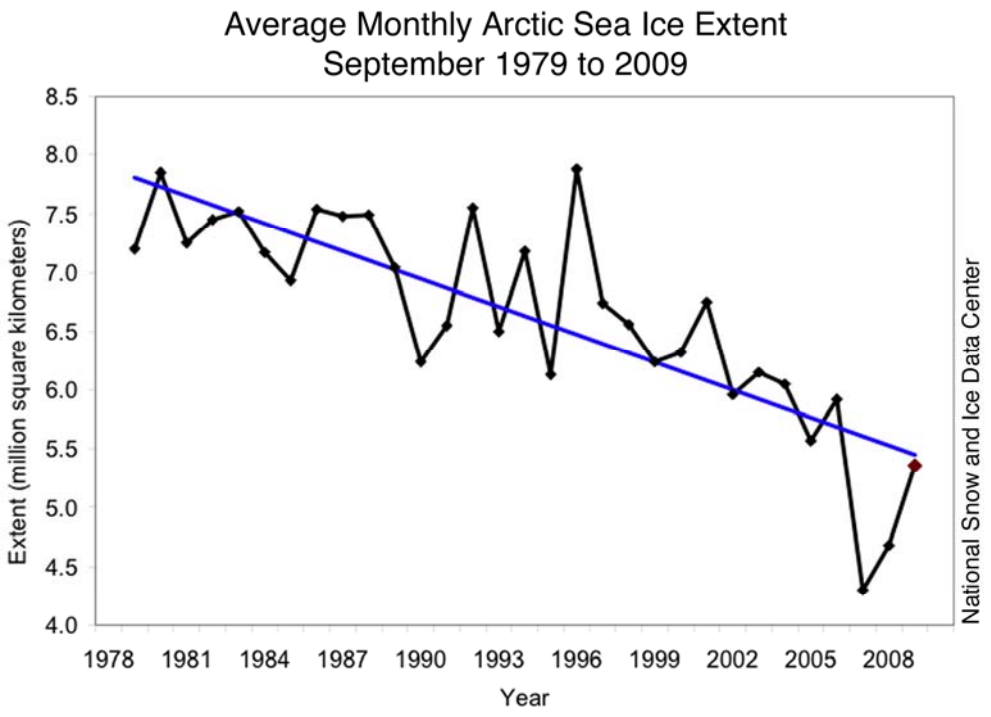

Figure 2. Average monthly Arctic sea ice extent during the month of September from 1978 to present. Sea ice extent in the month of September (roughly equivalent to the annual minimum) has generally been declining since the late 1970s. (Source: Service 2008d:28221; NSIDC 2009).

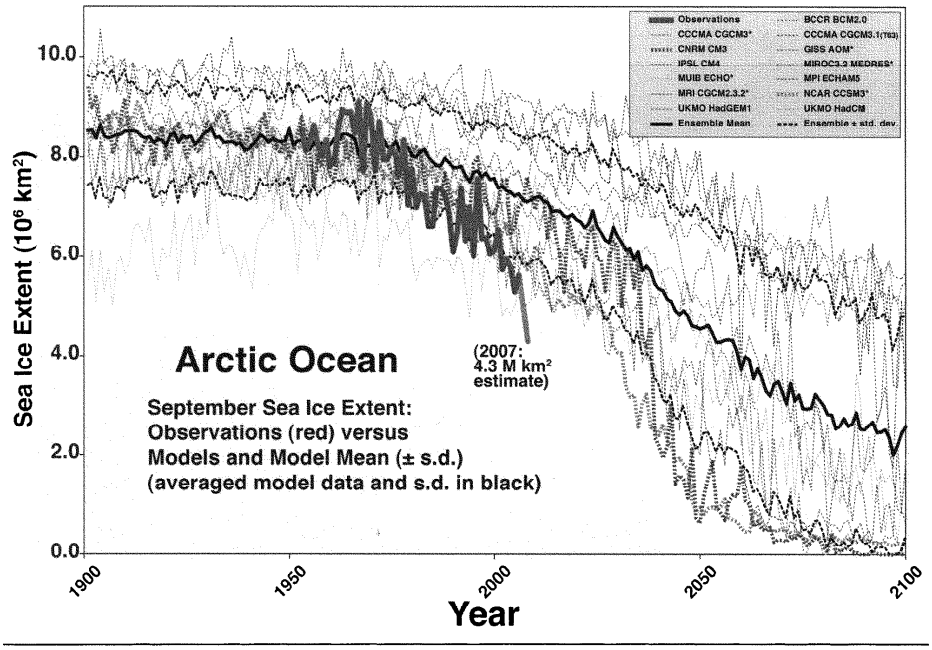

Figure 7. Arctic September sea ice extent. Comparison of observations with results of model runs (updated from Stroeve et al. 2007, pp. 1-5, used with permission).

Figure 3. Arctic September sea ice extent. Comparison of observations with results of model runs. (Source: Service 2008d:28233; Stroeve et al. 2007).

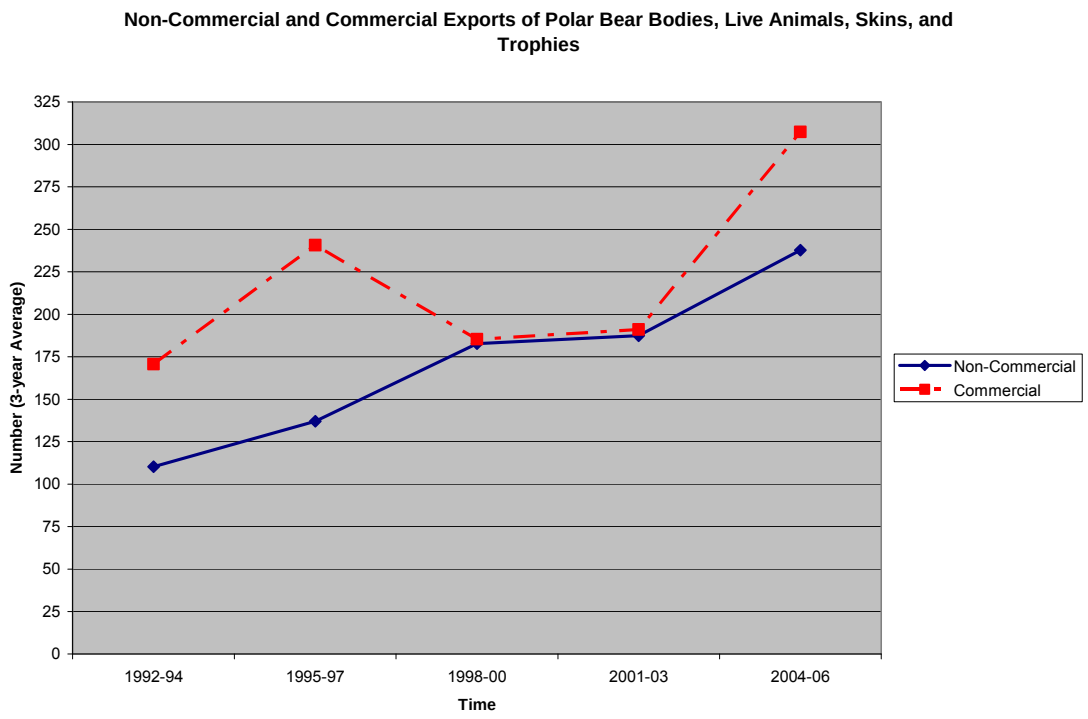

Figure 4. Non-commercial and commercial exports of polar bear bodies, live animals, skins, and trophies. (Source: Data from UNEP-WCMC CITES trade database 1992 - 2006).