By Federal Express

April 5, 2007

Supervisor, USF&WS
Marine Mammals Management Office
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Phone: 907-786-3800

RE: Comment in Opposition to the Proposed Rule to List All Polar Bear as Threatened, 72 FR 1064 (January 9, 2007)

Dear Sir,

This is a comment in opposition to the proposed listing of all polar bear populations as "threatened." It is filed by Conservation Force on behalf of itself and the North American Bear Foundation, Dallas Safari Club, Dallas Ecological Foundation, Houston Safari Club, the African Safari Club of Florida, Grand Slam/OVIS, the International Professional Hunters Association, the Sustainable Use Commission of the International Council for Game and Wildlife Conservation, the Foundation of North American Wild Sheep, the Guides and Outfitters Association of British Columbia, the Canadian Federation of Outfitter Associations (nine in total), and the National Taxidermist Association. Conservation Force and most of the parties joining in this comment are experts in all aspects of tourist hunting of polar bear and have funded and continue to fund and conduct polar bear conservation projects around the world. We are long-term stakeholders with an intimate understanding of the issues in the proposal. We are primarily non-profit conservation organizations that are long-term participants in the management and conservation of polar bear, their prey and habitat, and with the Arctic and its people. We are experts in both the related law, wildlife management and sciences. Though we are not ourselves experts in climatology or meteorology, we have consulted professionals that are experts on par with any in the world who have assured us that climate change and Arctic climate change are not predictable nor a credible basis for decision-making.

Conservation Force and many of those joining in this comment filed an opposition to the petition to list in response to the status review notice, 71 FR 6745.

*"**After** Taking into Account" Foreign Programs*

Most polar bear exist beyond the jurisdiction of the United States. There are special considerations when listing foreign species. The ESA does not provide for benefits to foreign species as it does for listed domestic species. To the contrary, listing has been known to interfere and have a negative effect upon foreign nations' programs

for the conservation of the species that are listed. The Service has recognized both this shortcoming and the detrimental impact of the listing of foreign species in some instances such as game animals, as has Congress. (See 68 FR 49512, page 49513 wherein the USF&WS states that "most of the key conservation provisions of the ESA do not apply to foreign species. Habitat conservation mechanisms, recovery planning and implementation, most Section 7 consultations, and the Section 6 grant-in-aid program do not apply to foreign listed species….") Congress has recognized this in oversight hearings and through the passage of special legislation to partially make up for the shortfall in benefits under the ESA for foreign species such as the African Elephant Conservation Act and the Tiger/Rhino Conservation Act. Perhaps such special legislation can and will be passed to benefit the bear, but that is separate and apart from the proposed listing under the ESA.

The ESA will not prohibit taking, provide critical habitat designation, habitat acquisition, habitat conservation plans, mitigation, recovery plans, cooperative agreements, funding, or the multiple benefits provided for domestic species for the conservation of polar bear in foreign lands.

The ESA mandates that the Service "shall" not list a species until "after taking into account" the "efforts" and "other conservation practices" of the foreign range nations. [BASES FOR DETERMINATIONS, Section 4(b)(1)(A)] This is a threshold issue, not an incidental issue after the fact. This "taking into account" is a separate and independent step from consideration of the "best available scientific and commercial data" in the listing determination that is to be made "after taking into account" the foreign programs. It is not to be skipped. It is a standalone issue and a reason by itself not to list the bear. This "shall" be considered in the listing process before, not after, the other information. The rest of the listing process is to be completed "after" and only "after" the range nation's programs are first considered. Similar language existed in the Endangered Species Conservation Act of 1969 which preceded the ESA.

It should be noted that there are two parts to the "foreign" provision. First, that it be taken in account before proceeding to the next stage. Second, that it is not limited solely to the best available scientific and commercial data rather than economic considerations because it is to be done before and independently. The history of the ESA and even Section 9 (c) 2 makes it clear that Congress supports the consideration of the revenue and economic incentives of tourist hunting in the instance of foreign nations.

> The section requires the Secretary to give full consideration to efforts being currently made by any foreign country to protect fish or wildlife species within that country in making a determination as to whether or not those species are endangered or threatened. There is provided ample authority and direction to the Secretary to consider the effort of such countries in encouraging the maintenance of stocks of animals for purposes such as trophy hunting. (Committee on Merchant Marine and Fisheries Report No. 93-412, July 27, 1973, *Determination of Endangered or Threatened Species,* pg.11., attached.)

If range nation programs are not first duly considered, a listing itself can be a threat to the survival of the species. The polar bear in Canada (and Nunavut) are the best

managed polar bear in the world, as well as the largest population. That in large part is due to the catalytic tourist hunting program that would be compromised if Canada's bear were listed. Even Greenland has recently instituted improved polar bear practices that were largely driven by a desire for tourist hunting. Listing would largely forestall the continued use of hunting as a tool of conservation in those Canadian areas with approved trophy imports into the United States, those areas still deferred for approval, as well as the prospects in Greenland and Russia.

This is not one of those instances foreseen by Congress where there is a need to list a species to prevent its importation, which is primarily what the ESA does for foreign species. The proposed listing would take away from, not serve, the bear. It is not trade that threatens the bear, if it is threatened. That is aptly covered by CITES and other internal and external laws and regulations. (There are already redundant trade controls: CITES, MMPA IPBT, MOUs, etc.) In fact, under 9(c)(2) of the ESA, the Service should not even be regulating trophy trade of a CITES Appendix II listed species like the polar bear, so trade control of a proposed-to-be "threatened" listed species is not at issue except inadvertently under the MMPA.

The listing would trigger the "depletion" provision in the Marine Mammal Protection Act. The MMPA prohibits the importation of "depleted" marine mammal species and "depleted" is defined to mean "any case in which" a marine mammal species or stock is listed as "threatened" under the ESA, 16 USC 1362(1)(C).

Tourist hunting is one of the founding pillars of Canada's polar bear conservation program. It is a conservation tool. See the attached Mitch Taylor letter of 1994 where he credits the importation of polar bear trophies with generating more conservation benefits than his 17 years (as of 1994) of achievements in Canada's polar bear conservation program. That member of the IUCN Polar Bear Specialist Group is still of that opinion today, 13 years later (personal communication). It is imperative that Canada and Nunavut's programs not be compromised by a listing that would be of little or no benefit to the bear as a foreign species.

Tourist hunting has been instrumental in providing incentives for Inuit people to voluntarily accept and adopt polar bear harvest quotas (which are entirely voluntary under the Lands Settlement Act), improved male to female harvest ratios, protection of cubs, MOUs with governments, co-management agreements and much more. It has helped create incentives and revenue that has made Canada and Nunavut the leaders of polar bear conservation in the world. (Eighty or more percent of Inuit are unemployed – Elizabeth Pheasant personal communication.) Recently the prospect of tourist hunting has helped get Greenland on track in monitoring and managing its harvest on quota for the first time. It is an invaluable conservation tool for which there is no substitute. See documents attached.

The primary author of this comment chaired the Renewable Wildlife Resources Committee of Safari Club International in the early 1990's that led the successful effort that reformed the MMPA to permit the importation of Canadian polar bear into the United States. The hearings and testimony were replete with the benefits and potential benefits of tourist hunting. They are incorporated herein by reference as if copied. In further Congressional recognition of the value of tourist hunting to polar bear conservation, Congress amended the MMPA in 1994, 1997, and again in 2004 to allow for the importation of more polar bear trophies. We've witnessed how it has enhanced

the survival of polar bear. The price of polar bear hunts has climbed from 12-15 thousand dollars to 28-32.5 thousand dollars in little more than a decade. The IUCN desktop study that tourist polar bear hunting was sustainable and could provide greater conservation incentives than the sale of bear hides (at 400-1,200 hundred dollars each) has been confirmed. See attached IUCN-SSC desktop study.

Of course, United States tourist hunters are not the only international hunters in Canada and Nunavut (though they constitute approximately 90 percent of the tourist hunters) and many areas have been deferred by the Service for imports and some areas are not even open to U.S. tourist hunting at this time (Greenland and Russia). Some few United States hunters may hunt even if they can't bring back their trophies. Nevertheless, far fewer United States hunters will desire to hunt if they can't bring their trophies home and virtually all will be unwilling to pay the prevailing prices. Those areas that have been deferred will have less incentive to improve their area than they have had to establish trophy imports into the United States. It is not just those areas that have been approved for import that would be negatively affected, it is also all those with a potential for import approval. (See the PBTC, 2006, reported [page11, line 17] that "[t]here is still an interest in having sport hunting in Quebec. Currently the government of Nunavut, the federal government and Makavik are in negotiations regarding sport hunting." This means they are attempting to address the published conservation reasons that the USF&WS deferred imports from that region.)

Tourist hunting has proven to be a very *useful* tool for the conservation of polar bear that would become a *useless* tool for any and all listed populations if listed. It is one thing to defer approval of trophy imports from a particular sub-population or region until better practices are voluntarily adopted, and quite a different thing to permanently remove that incentive from the conservation equation.

U.S. hunters not only purchase licenses priced at nearly one thousand dollars from the Canadian and Nunavut wildlife authorities, but also contribute one thousand dollars above that to Russian bear conservation through the National Fish and Wildlife Foundation. [MMPA 1136D; 50 CFR 18.30 (9) (2)] Both are direct revenue to wildlife management agencies and are above the more than $32,500 paid for the price of the hunt, of which $18,000 to $20,000 stays with the local community.

If you wish to further polar bear conservation then find some other means of doing so. It is repugnant to list a species over a range nation's objections. It is also repugnant to suggest to others that they will receive benefits that the ESA does not provide. When the benefits the bear will lose are "taken into account" or considered, the proposed listing would be a net loss to the bear's conservation. The negative consequences of the listing outweigh the nonexistent benefits the ESA provides to listed foreign species. The USF&WS is legally empowered and obligated to first take this into account, so please do so. This is a stand alone threshold reason not to list any foreign populations or sub-populations of polar bear, and most certainly is reason not to list any of the sub-populations in Canada and Nunavut.

The author of both the ESA and the MMPA, congressman John Dingell (MI), made it clear that the ESA should be used to favor foreign nations' tourist hunting programs when that hunting is part of a range nation's conservation strategy. *"H.R. 37…is a bill which has been carefully drafted to encourage…foreign governments to develop healthy stocks of animals occurring naturally within their borders. If these*

animals are considered valuable as trophy animals…they should be regarded as a potential source of revenue to the managing agency and they should be encouraged to develop to the maximum extent compatible with the ecosystem upon which they depend." –Congressional Record, September 18, 1993, pg. 30163. That is precisely why the polar bear should not be listed at all. This theme within the ESA is again expressed in the provision that foreign range nation programs should be "encouraged", International Cooperation, Section 8(b), Encouragement of Foreign Programs.

In its proposal, the Service recognizes correctly that tourist hunting does not threaten the bear (Factor B) but it has failed to first give due weight to the benefits of that hunting and its conservation role in Canada and Nunavut. It should be viewed and "encouraged" as the tool it is for conservation. The polar bear should not be listed over any range nation's objection without extraordinary cause.

Biological Benefits of Tourist Hunting

It is widely recognized that U.S. tourist hunting has been a biological benefit because of its selectivity. (See attached.) It has provided the incentive for the local people to agree to a male/female harvest ratio of 2-to-1 that had been closer to 1-to-1. It is particularly important that the harvest ratio continue to spare females and young when recruitment and cub survival are reduced because of ice conditions, prey availability, habitat conditions and habitat capacity. The females and cubs are so much more important to production than surplus males. Focusing the harvest on large males reduces the stress they would otherwise place on sows fending to save cubs from cannibalism. It also reduces the cannibalism losses that those large, hungry males would otherwise inflict. It is also fundamental that the reduction in surplus males, particularly large males, increases the prey availability for females and their more vulnerable cubs.

> "Management, theoretically, should…regulate the system of shooting so as to bend the existing (sex) ratio toward the optimum….[T]he ratio desirable in management of polygamous animals is slumped abnormally low in males." Aldo Leopold, *Game Management, Properties of Game Populations*, 1933.

Management means keeping the population within carrying capacity as that carrying capacity is falling, so that the remaining population stays healthier, less stressed and reproducing successfully. The remaining range will only support so much, but it will support that much. If the habitat and its carrying capacity is reduced by global warming, tourist hunting can be a most useful and desirable tool to help manage the population to better ensure its survival. Tourist hunting by U.S. hunters is a well-recognized tool for these very reasons. It is a useful force for conservation. These are all fundamental **factors** and mechanisms of game management set out by Aldo Leopold in 1933 that do and will increase the survival and breeding productivity of remaining polar bear.

> "Game management is the purposeful manipulation of factors…(and) consists largely of 'spotting' the limiting factor and controlling it….Game management proposes to substitute a new and objective equilibrium for

> any natural one which civilization may have destroyed." Aldo Leopold, *Game Management, Mechanisms of Game Management*, 1933.

We must express concern with the misleading press releases that have stated and implied that there would be a worldwide recovery program if the bear is listed and that the listing will not trigger the importation prohibitions of the MMPA. The suggestion that an ESA listing would provide benefits like those for domestic species or that it will not have a negative impact on the range nations' programs have been misleading. That warrants correction and republication of the proposal, and an extended comment period.

Biologically Significant Portion of Range

The two subpopulations said to be declining, Western Hudson Bay and Southern Beaufort Sea, are not a biologically "significant portion of the range" of polar bear. Those regions contain only a fraction of the world polar bear population (together less than one-tenth of the world population) and, moreover, are on the very southern edge of the bear's range and climate zone. The status of those two subpopulations doesn't warrant listing all of the polar bear in the world. The range and size of bear habitat is considerable. (There is more polar bear range north of the Arctic Circle than below it. Churchill of WHB is 2,000 miles south of the North Pole and there is a lot of polar bear range below it. It is closer to Key West Florida than it is to the North Pole. Most maps don't even show most of the Arctic Ocean.) All those bear will not likely become extinct.

Also, the status of those two subpopulations does not warrant the listing of those two subpopulations as distinct population segments. Though they are distinct population segments, neither is down sufficiently to be considered threatened with extinction at this time. The flimsy, negative future habitat loss projections are not "likely," nor are they a reliable basis for listing today.

The habitat and prey base of some subpopulations are expected to improve with the projected negative climate and sea ice changes. Also, even in the worst and most exaggerated negative projections, the very northernmost Arctic region will become better polar bear and prey habitat. Some may speculate that it may not be ideal habitat, but it need not be to prevent extinction and defeat a listing proposal [*Center for Biological Diversity v. Norton,* 411 F. Supp 1271 (D.N.M., 2005)]. A "significant portion of the range" of the polar bear will remain or become suitable habitat - actually *better* habitat - under virtually all of the projections. The polar bear is not "likely" to ever truly be in danger of extinction, so by definition it should not be listed as "threatened". The combination of the range that will improve and the range to the north that is now too cold for bear make the loss of significant habitat a non-issue. It is not "likely to become an endangered species" at any time in such a significant portion of its range to truly be at risk of extinction, 16USC 1532 (6 and 20). The legal jurisprudence provides guidance:

> "But even with a reduction in range, and reduction in absolute numbers of fish or fish populations, if the remaining core populations ensure the species' survival throughout its range or a significant portion thereof, then the species is not endangered. If the raw size of the range were the only

> determination factor, virtually every non-domestic species of wildlife in North America would be listed. Historical accounts in the Lewis and Clark journals, for example, describe abundant wildlife across the depth and breadth of the country they explored, and that historical range no longer exists in its pristine state." Court in *Center for Biological Diversity v. Norton*, 411 F. Supp. 1271 (D.N.M., 2005).

The polar bear, because of its harsh environment and isolation, has been spared the loss of habitat/range long ago experienced by most species. Now that some part of its habitat is seasonally projected to be in doubt in the future, it is not the loss of one particular portion or amount that warrants a listing. What amount and location truly threatens the bear with extinction is the issue, not simply geographic range and kinds and levels of impact. As long as a biologically significant portion of its range is expected to remain after validly projected losses, it should not be listed. The issue is not just any loss or impact, only one that is likely to cause its extinction. "Range contraction, even substantial range contraction, does not itself require a species to be listed," (Norton, supra., pg. 1279).

> "[I]t simply does not make sense to assume that the loss of a predetermined percentage of habitat or range would necessarily qualify a species for listing. A species with an exceptionally large historical range may continue to enjoy healthy population levels despite the loss of a substantial amount of suitable habitat. Similarly, a species with an exceptionally small historical range may quickly become endangered after the loss of even a very small percentage of suitable habitat….[T]he percentage of habitat loss that will render a species in danger of extinction will necessarily be determined on a case by case basis. Furthermore, were a bright line percentage appropriate for determining when listing was necessary, Congress could simply have included that percentage in the text of the ESA," *Center for Biological Diversity v. Norton,* supra., *page 1278* citing and adopting the language of the USF&WS.

Even though its geographic and/or historic range may be significantly reduced half a century in the future, only the "biologically significant portion of its range…warrants listing…."

In the above case cited, the Rio Grande Cutthroat Trout was found not to warrant listing. It was dependent upon "cold water mountain streams" like bear upon ice. Though only 13 of 267 subpopulations were not at risk, the denial of the listing was upheld by the court. The 13 subpopulations were about 5 percent of the total, but were biologically significant enough portions that the species would likely not become extinct – which is the underlying consideration. The fish's survival was "not threatened by the shrinkage in habitat" because the "13 core populations are sufficient to ensure the species' survival throughout all or a significant portion of the fish's range." The fish stream miles were estimated to be reduced from 91 to 99 percent and "restricted to first and second order streams that are narrow and small compared to second, third and fourth order streams," pg. 1287. Like the reverse of polar bear, it was claimed that the

remaining streams were too cold (instead of too warm) to be good habitat for the fish's reproduction. Therein the court said:

> "This is consistent with the purpose of the ESA. It may be akin to evaluating how well a school is performing its educational function by considering only the brightest and most diligent students, but such a focus makes sense if one is attempting to predict how well the school would perform in, say, a national science competition where only the best, hardest-working students would be in the running. The purpose of the ESA is not to assess generally how well the ecology is performing, but rather to make the best prediction possible as to a specie's chance of survival."

Ditto the grizzly that the USF&WS has just delisted from "threatened." Even though that subpopulation of grizzly occupies less than one-half of one percent of historic range and has less than one-half of one percent of its historic population numbers, it is not likely to become in danger of extinction again as a species. No forecast projects the polar bear to decline to one-half a percent of its numbers or range. It is not forecasted to be endangered with extinction in 45 years, pursuant to the law. The facts and projections don't meet the legal test for listing.

Present Status of the Western Hudson Bay Subpopulation

The approximate 22 percent decline in the WHB subpopulation is disputed. The alleged decline is based upon a comparison with an unreliable estimate made in 1987. The 1987 survey showed a record high level after years of increasing. That earlier estimate does not provide a valid mean average point of reference. Moreover, the past and present estimates are not comparable because of different methodology.

The more recent survey did not include the entire summer retreat area used by the subpopulation in the open water season, so it in fact missed part of the bear's known range and population. (Minister Patterk Netser statement of March 5, 2007 and PBTC minutes in 2006, both attached.) Since part of the range was not surveyed, there is no proven decline. The authorities and Inuit hunters in the area and Cabela's Outfitting report significant numbers of bear in the areas not surveyed (personal communications). In Cabela's hunting area north of the CWS survey geographic limits in WHB, hunters report seeing many bear each day. U.S. hunters in 2006 all reported seeing 60 to 80 bear in the Aruiat area north of Nunavut. "Total of three hunters was over 200 with four weather days out of 10." (All attached.)

The recent 2004 study was conducted by CWS entirely outside of the Nunavut portion of the WHB polar bear range (2006 PBTC, Shewchuk, pg. 6). That no doubt was caused by a change of governance, not bear population numbers. It should also be noted contradictorily that the aerial surveys conducted annually over the past 20 years in the Churchill area towards the Ontario border showed "no downward trend," Daryll Hedman report, PBTC, 2006. The decline is a fiction. A partial survey is not the "best" information.

Many knowledgeable people believe that particular subpopulation of bear has shifted within the region (Cabela's Outfitters, Inuit representatives). The annual darting and collaring of up to 80 percent of the bear (many twice a year), the Polar Bear Alert Program that scares away or traps and relocates bears from Churchill (58 bear handled and one killed in 2005), the 50 to 60 helicopter tours per day, the 15 large tundra vehicles during the polar bear tourist season and the closure of the garbage dumps since the 1987 survey all could account for the reduction in bear numbers in the area of the partial survey. Some part of the population should have dispersed when the Churchill dump was closed in 2005. (PBTC, 2006 minutes, page 14). In Churchill, people are even entering dens to photograph polar bear (David Lee, PBTC, 2006, page 14, line 48). One member of the PBTC made an unintended point when he said that the bears could leave if they were truly stressed by the tourism. Indeed they may have. It is at least important to note that the population decrease, if any, is likely exaggerated because of the above factors. With the reduction in Woodland Caribou, wolves would be expected to be killing cubs, which they are known to do. There may well have been an over-harvest by hunters as well, which is correctable adaptively and has been corrected. The number of bear taken in the last five to six years, plus those killed by researchers and the Polar Bear Alert Program, are greater than the suspected decline over the past 17 years. It appears that recruitment may need to be improved and until then the quota may need to be reduced, but that is all part of adaptive management and within the proven capacity of the local authorities and people.

It is not reasonable to blame a 22 percent decline on global warming when this particular population is the most harassed and stressed polar bear population in the world. This is even more so when the surrounding and even more southerly populations in Davis Strait and Southern Hudson Bay are stable or increasing. The overall increases across these southern subpopulations outmeasure the suspected decrease in WHB.

The "best" information is that there are many complex factors that set WHB apart, including the one survey not covering the whole area. At the most, global warming would be just one of many contributing factors for the suspected decline. The methodology of the surveys is not comparable and the bear may even have simply been overharvested (Minister, March 5th statement).

The analysis in the proposal not only exaggerates the impact from global warming, the causation-correlation is not what has been represented. The cited characteristics of the bear in the WHB region *predated the warming period!* The characteristics all began in the 1980's during a particularly *cold* period when many scientists and the world media were warning of a new glacial period (see attached). These bear characteristics were extensively studied and were already well documented in the 1980's by members of the IUCN Polar Bear Specialist Group and CWS. One of the primary causes advanced was that WHB was thought to be **too cold** with the same confidence it is now said to be too warm. (Perhaps a petition to list all of the bear in the world should have been filed then.) In this case, the facts are not as represented in the proposal. The correlation is not with warming, it is with a record high population level that had topped off in a frigid cold period. The undisputed facts refute the speculative hypothesis that the bear characteristics have been caused by global warming. Since it predates the warmer period, that correlation means that the most recent warming trend is

not the "likely" cause of the perceived decline and characteristics of the population in WHB.

The following are excerpts from *Density-Dependent Population Regulation of Polar Bears* by Andrew E. Derocher (chairman of the PBSG of IUCN) and Mitchell Taylor of NWT in the *Ninth International Conference on Bear Research and Management* (Monograph Series No. 3, 1994) under the subtitle *Western Hudson Bay (Churchill, Manitoba).*

> The recruitment rate noted in the Churchill population in the early 1980's was the highest found for the species in any population. However, during the period (1980-1990), the mean weight of polar bears in Western Hudson Bay declined (Derocher 1991, Derocher and Stirling 1992). Presumably in response to the decline in condition, cub survival in the first six months after den emergence declined from 75 percent in the early 1980's to 51 percent by the late 1980's; death of whole litters increased threefold (Derocher 1991, Derocher and Stirling 1992). These changes coincided with the closure of the Churchill dump to polar bears; however, only an insignificant number of the Churchill population used the dump…. These dump bears were excluded from the analysis showing declining condition and cub survival (Derocher and Stirling 1992). Derocher and Stirling (1992) offered four explanations for the declining weight of Churchill bears…. The mean temperature in Western Hudson Bay was colder than normal during the 1980's (Findlay and Deptuch-Stopf 1991). The unusually low temperatures could have reduced seal productivity or availability…. The Hudson Bay – James Bay populations are the most southerly of all polar bear populations….
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> The fourth possibility (Derocher 1991, Derocher and Stirling 1992) is that the current densities of polar bear may have nothing to do with the observed decline in maternal weight, cub survival and recruitment. The observed reduction in female condition, cub production and cub survival may be simply…. Large adult males also declined in weight during the 1980's (Derocher 1991).
>
> In many large mammals, density-dependent changes occur at population levels close to the carrying capacity…. The hypothesis that the density of polar bear suddenly became sufficient to trigger density effects in the early 1980's, almost 20 years after the introduction of harvest controls, would seem initially to have merit. However, population numbers appeared to be constant over the period (1980-90) when mean weight, recruitment rate and cub survival rate decline (Derocher 1991). (This document is attached.)

The Western Hudson Bay subpopulation status does not warrant its listing. A subpopulation segment at the southernmost limit of the population range and climate zone is not a biologically "significant" (enough) population segment" to be listed, much

less significant enough to list all the polar bear in the world. If the 22% decline is merely a shift within that range, as most believe, then there is even less reason to list this subpopulation. That subpopulation is merely adapting to weather variables, whatever the contributing causes of those variations. Over the past six years (2000-2006) the climate temperature in WHB has decreased 2.83 degrees centigrade (see attached NCDC graph). Finally, over the long-term this subpopulation has increased.

The bear of the Arctic north have long been spared the loss of habitat experienced by other species. How many other species in North America have lost so little of their historic range?

Southern Beaufort Sea

"Previously calculated estimates of the size of the Southern Beaufort Sea population have been unreliable," (1967-1998). The Service's "best model suggested an increase from around 500 females early in the study to as many as 1,500 at the end of the study…this could suggest a total population size of over 2,500 animals, many more than previously hypothesized." That "estimated growth rate…should be viewed cautiously." It is necessary "to develop a more reliable population estimate for the Southern Beaufort Sea."

All of these statements were made in the *Annual Report, Administration of the Marine Mammal Protection Act of 1972* for the years 1999 and 2000. (This is the last such report.) These statements contradict the statement in the FR notice (page 1070) that the Southern Beaufort Sea population is 1,500 and declining. In fact, the population has been estimated to be stable or increasing for decades.

Those estimates have also been said to be "overstated". If it was overstated, then a lower number arising from a more reliable survey methodology is just a correction. The new population analysis completed in the Spring of 2006 indicates a population estimate in the same number range. There is no significant difference or decline, nor are the sampling methods comparable enough to draw such a regulatory conclusion.

"The size of the SBS polar bear population was first intimated to be approximately 1,800 animals in 1986 (Amstrup and others, 1986)…For the late 1950's…the total population may have increased to as many as 2,500 polar bears. However…the estimate of 2,500 bears was not considered reliable." A new study was begun in 2001 and ran from 2001 to 2006. It concludes there are 1,841 polar bear in the region in 2006. "The best estimate of the total size of the SBS polar bear population in 2006 was 1,526 (95% CI = 1,211; 1,841)." "Our current estimate of population size and the earlier ones cannot be statistically differentiated." *Polar Bear Population Status in the Southern Beaufort Sea,* Eric V. Regehr, Steven C. Amstrup and Ian Stirling, Open-File Report 2006 – 1337, U.S. Geological Survey. The estimate "precludes a statistical determination that the total number of polar bears in the SBS region has changed in recent years," (late 1980's to 2006). The statement that the population has declined in the SBS is incorrect. That statement in the proposal is contrary to the belief of the very scientists that have performed the studies for two decades, quoted above.

Some represent that the SBS is following the WHB population. If so, the "likely" cause would appropriately have to be the earlier cold period when the characteristics of the bear were first detected in WHB. The SBS subpopulation's status does not warrant

its listing. If its status did warrant listing at this time, its significance to the survival of polar bear is not biologically sufficient as a matter of law. It is a fringe subpopulation and only a fraction of the overall population. All of these considerations aside, the climate temperature in Alaska has been declining since 2000 (6.86 degrees Celsius/decade. See attached.)

Climate Change Projections Do Not Meet the "Best Scientific Data" or "Likely" Tests

The various climate projections are not a sound, credible and reliable basis on which to list any population of polar bear. In fact climate cannot yet be credibly predicted at all. Assessment of the impact on Artic ice is even more remote and unpredictable. The number and variation between the projections speaks for itself. The further into the future the projection, the lower the confidence level. The issue is not whether the period of time (45 years) is three life spans, but whether or not the climate and future ice conditions are reasonably foreseeable that far in advance. They are not. It is beyond the limits of what is foreseeable. The intolerance to change in the composition of its environment is itself speculation, but the change in the composition of the environment is virtually unpredictable.

The only thing about the models that is correct is that they are likely to be incorrect because they have never before been correct. They are not viable and are contradictory. Arctic climate, the ice, and bear survival are far too complex for such modeling. It is beyond the state of the art. It is arbitrary and capricious to rely upon the climate projections. It's inherently unpredictable.

"Models do not accurately describe the current climate and have not been able to describe the climate of the past 30 years. For instance, computer models consistently project a rise in global temperatures over the past century that is more than twice as high as the measured increase. As the models cannot explain what has happened in the past, it is fair to question their predictions of future warming….The results from models that predict less warming in the future are generally closer to the observed data." (Dr. David Legates, report attached.) In fact, such projections are inherently fallible and unlikely. See Dr. T. F. Ball's report and addendum attached. *"The inability of the models to predict climate change is already evident in their inability to accurately simulate current or past conditions. It is also confirmed in the failure of all previous predictions. These predictions have consistently exaggerated the actual events."* For example, "the 2007 IPCC model temperature predictions and the sea level rise are once again reduced from previous reports." See Ball report attached.

Dr. David Legates reports that "[t]he complexity of the climate and the limitations of data and computer models mean projections of future climate change are unreliable at best. In sum, the science does not support claims of drastic increases in global temperatures over the 21st century…" (report attached).

Sub-regional variations in climate, ice, snow, winds and water currents and temperatures are also inherently unpredictable. One example is the fact that "sea-ice conditions in the Baffin Bay/Labrador Sea region, at least during the last 50 years, are within `Little Ice Age` variability. Grumet, et al; Variability of sea-ice extend in Baffin Bay over the last millennium. *Climate Change* 49:129-145. "[S]ince 1970, the climate in West Greenland has cooled (with the result that) Baffin Bay and David Straight

display strong significant increasing trends in ice concentrations and extent…." Laidre & Heide- Jorgensen 2005. Artic sea ice trends and Narwhal vulnerability. *Biological Conservation*. 121:509-517. On the opposite coast we understand that Alaska is cooling at this time. (See attached NCDC Climate Monitoring chart 2000-2006.) The climate temperature in Alaska has fallen five of the past six years.

Solar Cycles

There is sound scientific reason to believe that the world will be cooler by 2030, within the 45 year or three lifetimes utilized in the proposal. Unlike CO2, sunspots are a primary, not a secondary climate factor. We are "currently entering sunspot cycle 24 and cycle 25 is predicted to be very low (cold)." (Dr. Ball report, attached.) Projections based upon sunspots are a greater influence, more certain, predictable, and measurable than all of the CO2 climate models relied upon in the proposal. Projections based upon sunspots have long proven more reliable and likely.

"[S]olar radiation can account for 71 percent of the variation in global surface air temperature from 1880 to 1993." Legates citing *The Astrophysical Journal*, Vol. 472, pages 891-902, Willie Soon, et al, *Inference of Solar Radiance Variability from Terrestrial Temperature Change.*

Survival of Past Warming

The polar bear has survived all the warming and cooling periods in the past that were in greater extremes than currently being experienced. That is empirical proof that the risks of warming don't warrant listing. "The period from approximately 1910 to 1940 warmed faster and to a higher level" than today, yet the polar bear survived that. It was then warmer for a longer period of time than it has been in recent times. See Dr. Ball's and Dr. David Legates' reports, attached. "[A]rctic air temperatures were warmest in the 1930's and near the coolest for the period of recorded observations in the late 1980's." Dr. Legates, attached, citing Jonathan D. Kahl, et al., "Absence of Evidence of Greenhouse Warming Over the Arctic Ocean in the Past 40 Years," *Nature,* Vol. 361, January 1993, pages 335-337. Also, *Temporal and Spatial Variation of Air Temperature Over the Period of Instrumental Observations in the Arctic,* International Journal of Climatology, Vol. 20, No. 6, May 2000, pages 587-614. Ironically in a 1975 story Newsweek recommended to "pour soot over the Artic ice cap to help it melt" because it was thought to be a new ice age. The world did not come to an end when Greenland was green and when the Vikings were planting crops there.

CO2

The proposed listing is based upon two factors; projected loss of habitat (ice) and inadequate regulatory mechanisms to deal with the cause of that projected loss of habitat. Both are based upon assumptions and projections about abnormal CO2 levels. Those assumptions about CO2 levels are false. See the Addendum of Dr. Ball, attached, and the statement of Professor Zbigniew Jaworowski on March 19, 2004 before the U.S. Senate Committee on Commerce, Science and Transportation. There has been a false

assumption that CO2 levels today are greater than in the past. Once again the so-called greenhouse models are steeped in incorrect assumptions. We now know the assumptions are false. "The facts are that the pre-industrial CO2 level was not significantly lower than current levels." The "computer climate models" contain "a false threshold." This reconfirms the fact that CO2 is a secondary, not primary, influence on climate and the significance of entering into the 25th sunspot cycle which will predictably be colder.

None of the climate projections are reliable or credible, much less "likely", which is the legal requirement. Selecting one would be the epitome of being arbitrary and capricious. The Service has admitted it is beyond its expertise, so any projection would not be entitled to any legal deference. No projection can be said to be "likely." The "best" scientific information is that CO2 is not in fact much higher than in pre-industrial times and that the 25th solar cycle will likely make it cold in the near future.

*Not **"Likely"** to be at Risk of Extinction in the "Foreseeable Future"*

The plain language of the ESA and the jurisprudence "requires a determination as to the likelihood – rather than merely the prospect – that a species" will or will not become endangered in the foreseeable future. [*Oregon Natural Resources Council v. Daley,* 6 F. Supp. 2d 1139 (Ar., 1998), page 1152.] The climate projections are not reliable enough to be "likely." To the contrary, they are likely to be incorrect overestimates.

Unless the 25th solar period is properly added to a particular model, the 2030 cold period cannot be properly projected. If that 25th solar cycle is not factored in, the projection is not the best scientific data and the threat projected cannot be said to be "likely" which is the required legal test.

Regardless, the threat of extinction is not likely for a number of reasons. The bear survived the warm temperatures prior to the Little Ice Age and the hot Arctic air temperatures in the 1920-1940 period. Both were hotter than the present.

Arctic climate has always varied dramatically from one area to another. Warming and cooling are presently occurring simultaneously in different polar regions as they always have. For example, coastal stations in Greenland have been experiencing a cooling trend and average summer air temperatures at the summit of the Greenland Ice Sheet have decreased at the rate of four degrees Fahrenheit per decade since measurements began in 1987. Petri Chylek, et al, *Global Warming and the Greenland Ice Sheet, Climate Change,* Vol.63, Nos. 1-2, March 2004, pages 201-221.

The primary cause of sea ice conditions has been found to be determined by changing wind patterns with global warming playing only a minor role. (Greg Holloway's study for Canada's Department of Fisheries and Oceans, *Is Arctic Sea Ice Rapidly Vanishing?*, Fisheries and Oceans Canada – Pacific Region.) There is a great leap from climate projections to sea ice projections of every kind.

IUCN

The Service has given undue weight to the IUCN Polar Bear Specialist Group's Red Listing of the polar bear as "vulnerable". That is a relisting as "vulnerable" as it has been throughout its history, except for a short period in which it was treated as

"conservation dependent". It's practically always been "vulnerable", but because of far more likely and reliable reasons than the climate projections. This time the "vulnerable" status does not rest upon the bear's present status; it rests upon science fiction projections three generations into the future.

The Red List criteria of the IUCN are not the same as the five factors and considerations of the ESA. Neither is the extent of range determination the same. The automatic formulas of the Red List criteria such as a percentage of loss in numbers over a specified time are not applicable to the ESA. There is no fixed 30 percent decline in population under the ESA, which is the criteria used by the PBSG. The adoption of such a formula would be patently illegal. Neither is the IUCN a regulatory body or even a duly-elected government agency of any kind whatsoever. Nor does any level of Red Listing trigger the MMPA "depletion" clauses that prohibit trophy imports of "threatened" listed marine mammals.

What is important is that the IUCN Polar Bear Specialist Group did not itself follow Red Listing criteria. There is no direct climate change/global warming criteria as such in the criteria guidelines. (See attached letter from the IUCN on this point.) There may never be climate criteria, since long-range climate projections are such an unreliable basis for decision making. The climate projections are far beyond the acumen of the Polar Bear Specialist Group.

The PBSG proceedings show that the Polar Bear Specialist Group listed the bear as "vulnerable" out of precaution as an advisory or alert to user groups to issue quotas conservatively until we know better on the "possibility" that any of the climate and ice projections are correct. It was not the present status of the bear, but concern about "possible" – not necessarily "likely" – climate impact upon the bear simultaneously with an increase in harvest quotas in the future.

The IUCN Red Listing criteria and ESA are so different that they are not comparable. The IUCN criteria (hereinafter "criteria") is a fixed mathematical formula that applies regardless of the biology of the species and its habitat needs. It applies exactly the same to all species of mammals. It does not consider the "biological significance", the "portion of the range" or judge the real likelihood of the threat. The IUCN has taken all judgment out of the process and replaced it with a mathematical calculation. The IUCN does not weigh the "significance" of the habitat, the biological needs of the particular species, or make a reasoned "determination" of the risk. The group just applies the fixed, universal formula without exercising judgment.

The IUCN projects future decline over a fixed number of lifetimes regardless of the particular species, whereas there is no formula under the ESA specifying how far into the future. In this case, the issue to be considered is not the life spans or number of life spans into the future. It is whether or not the perceived/conceived threat can be reliably projected. This approach also arose because at the same meeting the group was arguing with a user group that thinks there are too many bear.

The issue is whether or not the sea ice conditions and prey availability related to that can be reliably predicted at all for projections into the future that are both credible and "likely". IUCN has no formula or criteria embracing this kind of determination. It has just arbitrarily accepted some "possible" climate projections even though it is beyond IUCN's expertise to judge the projections. The group simply accepted the negative climate hypotheses and assumed uniformity and continuity of the projected change and

its impact on the ice and prey. In fact, the future is unpredictable. We think the group took the precautionary approach and applied it like an automatic formula. If in doubt and it's possible, then give the species the benefit of the doubt to be safe. A mere "possibility" is not enough under the legal tenets of the ESA with its regulatory consequences. The threat must be "likely", not in doubt or only "possible".

The group did not and would not have changed the Red Listing to stop importation of trophies as is the purpose of an ESA listing of foreign species. The Polar Bear Specialist Group supports the continued importation of the bear trophies and has expressly recognized tourist hunting benefits in their resolutions: Res.3-1997. See attached. The comparisons in the proposal are not valid. All of the criteria of an IUCN Red Listing are different, but so are the biases, agendas, purposes and responsibilities of the group and its individual members and leadership.

Miscellaneous Anecdotal Information

The proposal is full of anecdotal reports of little use or weight. The report of four bear seen from a plane and presumed drowned after a horrific storm of long duration is of no consequence. Bears drown in storms as surely as ships sink, and will continue to do so. Unlike ships, polar bear don't even sink immediately when dead. They have always cannibalized their own as have other bear species. Witness how sows keep cubs away from boors. (*Wild Animals of North America,* Jack Lentfer of MMC, page 562, ironically blaming "heavy icy conditions.") These occurrences don't warrant concern or mention.

Bear are extremely adaptable. They eat anything and everything. They disperse and migrate.

In an absolute sense, bear should fare better in their warmer southern range than in their northern range. Witness Davis Bay. When the southern subpopulations are added together there is an overall increase in the number of bear across their southern range. There are no permanent bear in the Arctic Region itself – which is thousands of miles north of the Churchill - because it is too cold and frozen for the bear, as well as seals or other prey. There are more alternative food sources in the warmer part of the bear's range than where it is too cold. Given an alternative, a slightly warmer environment is better than a slightly colder environment. There are fewer polar bear in the Arctic highlands than in the Arctic lowlands. The bear have experienced and survived extremes of both for ages.

The Foreseeable Future

The period of 45 years (three life spans of 15 years) is not a reasonable "foreseeable future" period of time. Section 3 (19), *Definitions, Threatened* under the ESA. The full Committee Hearings in 1972 offer illumination on what Congress intended by the "foreseeable future" clause. In the Q&A, foreseeable future is defined as "A species might be judged to be likely in the foreseeable future to become endangered in those circumstances where continued exploration or habitat destruction at a given rate would result in its becoming endangered in a period of **up to 10 years**, depending on the animal's breeding characteristics in relation to population size." (Attached Hearings before the *Subcommittee on the Environment,* August 4 and 10, 1972.) In this proposal

the Service is exceeding that upper limit four and one-half times. The only other expression in the Congressional history is that of Representative Clausen stating, "In approving this legislation, we will be giving authority for the inclusion of those species which…might be threatened by extinction **in the near future.**" (Attached.)

The period of 45 years is too great a time for reliable ice projections based upon projected climate projections, not that there is any reliable relationship between the two. It is a triple level projection that the (1) climate will warm to a particular degree, (2) which will in turn cause the ice to melt a particular amount which will in turn (3) effect a biologically significant portion of the polar bear and its range to the extreme degree of extinction. Though this threat does not have to be certain, it must be "likely." Ice coverage qualities and location cannot be soundly forecasted scientifically to the level of being "likely"45 years into the future. Such a long time is beyond the period that can be foreseen to a "likely" degree. It is not foreseeable. It is science fiction, if anything.

Legally, the USF&WS is not at liberty to adopt the IUCN's fixed Red List criteria formula of ten years, or three generations, whichever is longer. Moreover, with this species one single life span is one and one-half times the ten year base and three life spans is four and one-half times the base of ten years. It is the very epitome of arbitrary and capricious, thus illegal. In the case of a foreign species it is outright irrational to knowingly destroy another nation's conservation efforts over their objections on unlikely projections.

The IUCN SSC criteria do not intend or contemplate climate change projections at all, much less projections beyond the state of the art and information. See attached IUCN letter.

The PBSG are not ESA experts and don't know the legal meaning and terms to express a legal opinion. If they were well acquainted with the meaning of ESA provisions, that was not relevant to the Red List criteria they were applying.

The quality, quantity and distribution of ice cannot be reliably forecast for one bear's life expectancy of 15 years. Bears live beyond the foreseeable future of ice conditions that are largely controlled by wind and other innumerable variables. "Foreseeable future" means the future that can be foreseen, but only foreseen to the extent of being "likely". The nature of the threat is also a critical factor in such a determination, not the life expectancy of the species. The life expectancy of the species is only a part of the equation. In this case the life expectancy of a bear is of little value in determination what the "foreseeable future" is.

If sunspot cycles are factored into the projection model as they should be, the Arctic will be plenty cold enough for more ice than today by 2030, one and one-half life bear times. Ball and Willie Soon, supra.

Solely on Basis of Best Scientific Data Available

The layers of projections underlying the assumptions about the arrangement, quality and quantity of ice habitat in the future are not facts. They are untested hypotheses that have yet to be proven valid or been validated scientifically. The projections are not facts that have been tested, confirmed and considered to be true. The further in time the projections and the greater the number of variables, the lower the confidence level.

The 45-year projections and assumptions basis of the proposal are not reliable or credible enough to be classified as scientific data.

> "In science, explanations are limited to those based on observations and experiments that can be substantiated by other scientists. Explanations that cannot be based on empirical evidence are not a part of science." (National Academy of Sciences, *Science and Creationism: A View from the National Academy of Science*, Second Edition, 1999, page 1.)

We don't believe that the projections cited in the proposal are reliable or credible enough to satisfy the *Information Quality Act* (Section 515 of P.L. 106-5546 H.R. 5658); OMB at 67 FR 8452 (February 22, 2002). The models cited don't make empirically tested or testable predictions. They contain too many biases and assumptions and too few factors and variables to be reliable. Many of the assumptions are hidden and unstated.

Though the proposed listing involves major economic factors in which scientists have an interest (e.g., research funding, employment, recognition, etc.), the individual models do not qualify as present scientific data.

The species is not facing extinction today so there is no need to list prematurely based upon unreliable models. Delay will not compromise the species, but listing will. There is little or no risk in not listing the species at this time. A federal agency proposing an action has the duty to show its action will not jeopardize a species if a biological opinion is rendered on the basis of inadequate information. U.S. House, Committee of Conference, *Endangered Species Act Amendments*, H. Rep. 96-697, GPO, 1979, pg.12. See joint FWS/NMFS *Endangered Species Consultation Handbook*. That is directly in issue here where the listing of a foreign species is being considered which in turn will trigger restrictions under the MMPA. In this instance the models projecting the future constitute no more than "speculation and surmise," not credible scientific data. See *Bennett v. Spear*, 520 U.S. 154, 137L. Ed. Fed 2 81, 117 S. Ct. 1154 (1997) stating "The obvious purpose of the requirement that each agency 'use the best scientific and commercial data available is to ensure that the ESA not be implemented haphazardly on the basis of speculation or surmise." Also *City of Las Vegas v. Lujon*, 891 F.R. 927, 933 (D.C. Cir. 1989).

Regulatory Measures

For all the reasons already stated, the absence of regulatory measures is not likely to cause polar bear to become extinct or to be in danger of extinction.

The absence of such regulations did not cause the bear to become extinct from 1920 to 1940 when it was warmer for a longer length of time. Regulations today would make no difference during the upcoming 25th solar cycle when it gets colder. They would only harm those areas in the Arctic that are now expected to improve if the hypothetical projections of warming prove true. Regardless, a significant portion of the range will remain habitable to ensure survival of the bear, even if one assumes the unproven hypothesis that some small reduction in man-caused CO2 output would be of any measurable consequence. Mankind and the bear and all vegetation may need that CO2 in the 25th solar cycle.

The regulations we are most concerned about is the ESA and the MMPA. The concern is over-regulation by listing not under regulation. It is irrational to hamper the foreign nations in their primary conservation efforts due to our suspected emission problems. It is irrational to punish the Arctic people and retard their proven programs for what is beyond their control and our own doing, if true. There are no allegations that Arctic people are responsible for suspected excess CO2 output or causally contributing to global warming. It is not their failure to regulate CO2 that is the **cause** of the projected CO2 threat. Therefore this **factor** is not a basis for listing. Nunavut can't regulate or protect itself from the CO2 pollution of others. Congress could not have intended that kind of failure to be grounds for listing. The inadequacy of the regulations must be both the **cause** and within the **control** of the respective foreign country.

It is we here in the USA that stand accused. In essence, listing foreign polar bear is penalizing Artic people for our own suspected and projected wrongdoing. That would be taking the ESA where it was never intended to go and render it irrational. The listing of polar bear is in effect an economic sanction against the innocent foreign range nations.

Conclusion

There is no urgency to list polar bear prematurely. There are plenty of reasons not to interfere with foreign range nation programs since it is not they who may be at fault for global warming. Should the United States be a contributing cause of global warming and should global warming in due course impact the polar bear, then redress the wrong in some more appropriate manner (and closer to the source of the threat – CO2 production) than further harming the range nations by adding to their injuries by the natural consequence of obstructing their conservation programs.

The polar bear is not really facing extinction. A biologically significant portion of its range will likely remain for it to survive under all but the most ridiculous of the climate projections.

The greatest threat to the greatest number of bear in the short and long term is this proposal. The proposal fails the threshold test. The "efforts" of foreign range nations should come before our self-serving desire to list their subpopulations.

Respectfully submitted,

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