

## INADEQUATE LAW LEAVES ICE BEARS IN DEEP WATER

### INTRODUCTION

“Polar bears don’t have a place to go if they lose the ice.”<sup>1</sup> If the global temperature continues to increase at the predicted rate, a future without sea ice is an all too real possibility unless substantial intervening measures are taken.<sup>2</sup> Humans have arguably caused the most damage to the environment, especially after the start of the industrial revolution, with greenhouse gas (“GHG”) emissions being a significant driver of climate change.<sup>3</sup>

Over the past century, laws have been enacted to protect wildlife species from irreparable harm. The Marine Mammal Protection Act (“MMPA”) is intended to give the U.S. Fish and Wildlife Service (“Service”)<sup>4</sup> the ability to protect marine mammals—it makes it a crime to harm or kill marine mammals—but the exceptions to this law prevent the Service from providing adequate protection. The MMPA was enacted specifically to protect marine mammals, but it falls short of that goal by only requiring the Service to consider the direct impacts of proposed activities to the animals and over a very limited time frame; it does not require the Service to account for one of the biggest threats to marine mammals today: climate change.<sup>5</sup>

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<sup>1</sup> *Ctr. for Biological Diversity v. Hemphorne*, 2008 U.S. Dist. LEXIS 109152, at 2 (D. Alaska Apr. 22, 2008).

<sup>2</sup> IPCC, 2018: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., et al. (eds.)]. In Press. 37,

[https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15\\_Full\\_Report\\_High\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf)

<sup>3</sup> Fairbanks Fish and Wildlife, Conservation Office, U.S. Fish & Wildlife, *Biological Opinion for Willow Master Development Plan*, 87 (Oct. 16, 2020)

[https://eplanning.blm.gov/public\\_projects/109410/200258032/20028643/250034845/2020\\_10\\_16\\_Willow%20FINAL%20BO.pdf](https://eplanning.blm.gov/public_projects/109410/200258032/20028643/250034845/2020_10_16_Willow%20FINAL%20BO.pdf) (“BiOp”)

<sup>4</sup> *Marine Mammal Protection Act Policies, Guidance, and Regulations*, NOAA Fisheries (Last updated May 2023) <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-policies-guidance-and-regulations> (U.S. Fish and Wildlife Service is the agency responsible for the protection of walrus, manatees, sea otters, and polar bears. NOAA Fisheries is responsible for the protection of whales, dolphins, porpoises, seals, and sea lions.)

<sup>5</sup> See Marine Mammal Protection Act (“MMPA”) Sec. 101(a)(1), (a)(5)(i), 16 U.S.C. 1371

This paper will discuss some of the major issues with the MMPA, specifically the issues regarding incidental take regulations (“ITR” or “permits”). It will briefly discuss how courts have handled cases involving oil and gas activities, demonstrating how the MMPA fails to protect Arctic wildlife, polar bears in particular.

Part I provides a quick overview of climate change as well as a summary about polar bears and how they are impacted by the warming climate.

Part II discusses the goal of the MMPA, the notable shortcomings that render it woefully ineffective, and some examples of how courts have dealt with alleged violations of it in the past.

Lastly, Part III provides recommendations to amend the ITR provisions in the MMPA to expand its scope, allowing the Service to consider climate change in their permit authorization process.

## **I. SEA ICE DECREASES AS GLOBAL TEMPERATURES RISE**

Since 1850, the average global water and land temperature has increased at an average rate of 0.06 degrees Celsius (°C) each decade.<sup>6</sup> This figure may seem small, but the negative impacts it has on the planet are not.

Observed warming is human-caused, with warming from greenhouse gases (GHG), dominated by CO<sub>2</sub> [carbon dioxide] and methane (CH<sub>4</sub>) .... Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years.<sup>7</sup>

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<sup>6</sup> Rebecca Lindsey et al., *Climate Change: Global Temperature*, Climate.gov, <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature>

<sup>7</sup> IPCC, 2023: Sections. In: *Climate Change 2023: Synthesis Report*. Contribution of Working Groups I, II, and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)] IPCC, Geneva, Switzerland, pp. 35-115, 42 [https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf) (“IPCC, 2023”)

The primary source of CO<sub>2</sub> emissions in the U.S. comes from transportation, electricity use, and industrial activities.<sup>8</sup> It is the combustion of fossil fuels (oil, coal, and natural gas) which emits CO<sub>2</sub> as a byproduct.<sup>9</sup>

Arctic sea ice is measured in September when it has the least amount of coverage; doing so most accurately represents how much ice is melting each year.<sup>10</sup> For every metric ton of CO<sub>2</sub> that is emitted, there is a loss of about three-square meters of September sea ice.<sup>11</sup> In 2022 alone, approximately 321 million metric tons of CO<sub>2</sub> were emitted from energy-related production.<sup>12</sup> The increase in GHG emissions has led to an overall increase in the earth's temperature<sup>13</sup> and this increase is the direct cause of melting sea ice in the Arctic<sup>14</sup>—where polar bears call home.

Since 1979, the amount of sea ice that has been lost every year is equivalent to the size of South Carolina (31,000 square miles)<sup>15</sup> and polar bear populations are suffering.

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<sup>8</sup> *Greenhouse Gas Emissions*, United States Environmental Protection Agency, <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#carbon-dioxide>; See also *Methane*, Climate and Clean Air Coalition, <https://www.ccacoalition.org/short-lived-climate-pollutants/methane> (Agriculture is the primary emitting sector of methane accounting for 40% of methane emissions. The fossil fuel sector accounts for 35% of methane emissions with oil and gas operations being the largest source of emissions within the fossil fuel sector.)

<sup>9</sup> *Fossil*, Energy.gov, <https://www.energy.gov/fossil>

<sup>10</sup> Rebecca Lindsey et al., *Climate Change: Arctic sea ice summer minimum*, Climate.gov, (Oct. 18, 2022)

<https://www.climate.gov/news-features/understanding-climate/climate-change-arctic-sea-ice-summer-minimum>

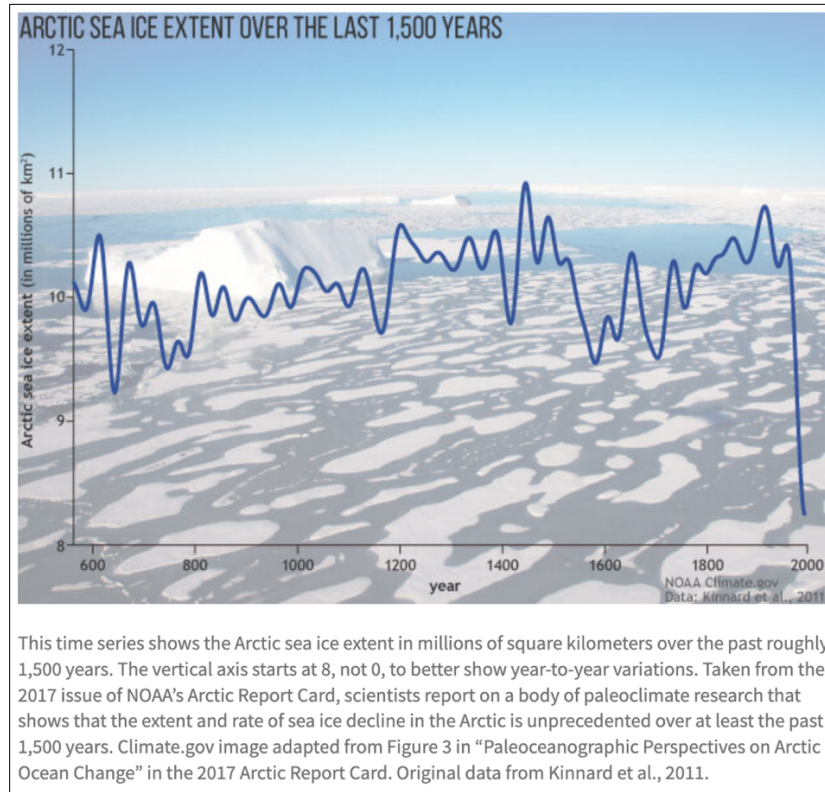
<sup>11</sup> Dirk Notz et al., *Observed Arctic sea-ice loss directly follows anthropogenic CO<sub>2</sub> emission*, *Science*, (Nov. 3, 2016) <https://www.science.org/doi/10.1126/science.aag2345>

<sup>12</sup> *Risk of runaway emissions growth from shift to coal amid global energy crisis fails to materialise as renewables, EVs, heat pumps, efficiency and other factors reined in CO<sub>2</sub> rise*, *International Energy Agency*, (March 2, 2023) <https://www.iea.org/news/global-co2-emissions-rose-less-than-initially-feared-in-2022-as-clean-energy-growth-offset-much-of-the-impact-of-greater-coal-and-oil-use>

<sup>13</sup> *Climate Change Indicators: U.S. and Global Temperature*, United States Environmental Protection Agency, <https://www.epa.gov/climate-indicators/climate-change-indicators-us-and-global-temperature>

<sup>14</sup> See IPCC, 2023 *supra* note 7, at 46.

<sup>15</sup> Lindsey, *supra* note 10.



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### A. ICE BEARS EXTREME RISK OF HABITAT LOSS

“[T]he greatest factor impacting the status of polar bears is loss of sea ice resulting from climate change.”<sup>17</sup> The Beaufort Sea region of northern Alaska and Canada is home to many polar bear subpopulations. The Southern Beaufort Sea (“SBS”) polar bear subpopulation has already suffered consequences of the melting sea ice; between 1986 and 2010—a 24-year period—their numbers were cut in half from 1,800 bears to 900.<sup>18</sup>

Sea ice is critical for polar bears’ survival; they spend the majority of their life on the ice and it is the only place they can successfully hunt.<sup>19</sup> Polar bears are massive animals and cannot sneak up on seals (their main food source) if they swim next to them.<sup>20</sup> They rely on the element

<sup>16</sup> *Id.* (Graph and caption) (Illustrates sharp decline in sea ice coverage in the past 50 years).

<sup>17</sup> BiOp, at 87.

<sup>18</sup> BiOp, at 86.

<sup>19</sup> *Diet & Prey*, Polar Bears International, <https://polarbearsinternational.org/polar-bears-changing-arctic/polar-bear-facts/diet-prey/>

<sup>20</sup> *Id.*

of surprise which is afforded to them through the thick ice where they can lie in wait until a seal pops its head through an air hole.<sup>21</sup> Due to the bears' size and the extended periods of time they have to survive without food, they require large amounts of food at a time to survive.<sup>22</sup> Food sources on land are not viable options to sustain the polar bear population given the size discrepancy between seals and food they can find on land like "geese, bird eggs... and the occasional small mammal."<sup>23</sup>

Male bears can live for about 6 months without eating. Over winter, female bears spend 7-8 months in their dens in the snow, suckling their cubs, and during that time they have no food intake.<sup>24</sup>

Seals usually provide bears enough calories so they can build up adequate fat stores to last them several months, but the limited resources on land cannot.<sup>25</sup> As the sea ice melts, the bears' hunting ground gets smaller and farther away from the mainland. When mother bears depart their dens they make their way to the coast with their young and swim to the pack ice to hunt.<sup>26</sup> Since more ice is melting each year, the distance the bears must swim to reach it increases, putting them at risk of exhaustion, sometimes to the point of drowning. In 2004, "four drowned polar bears were observed in the Beaufort Sea during a ... coastal aerial survey program."<sup>27</sup> Fortunately, drowning incidents have not been frequently observed since 2004 but the ice continues to melt, so the distance between the coast and the pack ice continues to

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<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> *Polar Bears*, Polarpod, <https://www.polarpod.fr/en/encyclopaedia/arctic/5-life-on-land/3-polar-bears>

<sup>25</sup> *Diet & Prey*, supra note 19.

<sup>26</sup> *Life Cycle*, Polar Bears International, <https://polarbearsinternational.org/polar-bears-changing-arctic/polar-bear-facts/life-cycle/>; *Pack Ice*, Oceanwide, <https://oceanwide-expeditions.com/to-do/experiences/pack-ice> (Ice pack, also called pack ice, "is made up of smaller ice fragments that have frozen together into a solid body. The smaller pieces are called drift ice.... Ice floes are the largest and most common form of the drift ice that comprises pack ice.... When currents and winds bring these floes together and they freeze into a single mass, the result is pack ice.")

<sup>27</sup> *BiOp*, at 88.

increase, putting mother bears who haven't eaten in nearly eight months at a higher risk of exhaustion.

Due to the amount of time bears spend in and near the water, they are categorized as marine mammals and thus fall under the protection of the MMPA. In 2008, they were also listed as "threatened" on the Endangered Species List.<sup>28</sup> Despite the double layer of protection, the species is still extremely vulnerable.

Further projections confirmed sea ice decline is the most influential driver of adverse population outcomes for polar bears, and predict the adverse consequences of sea ice loss may become more pronounced as early as mid-century if greenhouse gas emissions remain unabated.<sup>29</sup>

It is well-established that climate change is the primary threat to polar bears' continued existence on this planet.<sup>30</sup> They are the first species to have been listed on the endangered species list with climate change indicated as their primary threat, and yet one of the laws that is designed to protect these animals fails to consider that threat.<sup>31</sup> It needs to change.

## II. GOALS OF THE MMPA AND WHY IT IS FAILING

The MMPA was established with the goal of protecting marine mammals by placing a moratorium on the "taking and importation of marine mammals."<sup>32</sup> The term "take" is defined as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal."<sup>33</sup> However, as with any rule, there are exceptions.

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<sup>28</sup> *Polar bear (Ursus maritimus)*, Environmental Conservation Online System, (Last updated June 11, 2021) <https://ecos.fws.gov/ecp/species/4958>

<sup>29</sup> BiOp, at 87.

<sup>30</sup> *Id.*

<sup>31</sup> *Polar bear facts*, World Wildlife Fund, <https://www.worldwildlife.org/species/polar-bear>

<sup>32</sup> *Marine Mammal Protection Act*, Marine Mammal Commission <https://www.mmc.gov/about-the-commission/our-mission/marine-mammal-protection-act/>; see 16 U.S.C. 1371

<sup>33</sup> MMPA Sec. 3(13)

## **A. BASICS OF INCIDENTAL TAKE REGULATIONS (PERMITS)**

The U.S. Fish & Wildlife Service can authorize permits for applicants who plan to engage in specified activities within a specified geographic region which may incidentally cause harm to marine mammals.<sup>34</sup> These permits are granted for five years at a time and they allow for the incidental taking of marine mammals provided that the predicted impact on the species would be negligible.<sup>35</sup> Applicants often include companies that plan to begin a major project, such as oil and gas exploration. To get approval of the project they must comply with federal regulations regarding potentially adverse impacts to the environment and protected wildlife.<sup>36</sup>

The Marine Mammal Commission and other scientific advisors are given the project proposal to review, after which they provide their conclusions to the Service about the likely harm to protected wildlife and any other concerns they have about the proposal and its potential impacts.<sup>37</sup> The Service is required to consider the best scientific evidence available to determine the likely adverse impacts to the species (however many are at risk of incidental takes) before approving a permit.<sup>38</sup> This is where things begin to fall apart.

## **B. THE MAJOR PROBLEMS WITH CURRENT ITR PROVISIONS**

On their face, the following provisions appear as if they promote the protection of marine mammals, but unlike the natural world, these provisions have failed to adapt to the changing environment. Consequently, they fail to provide the protection for which they were designed.

The MMPA states that a permit's duration is not to exceed five consecutive years; before the five-year period ends the permit-holder must apply for another permit in order for the

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<sup>34</sup> MMPA Sec. 101(a)(5)(A)(i)

<sup>35</sup> MMPA Sec. 101(a)(5)(A)(i)(I)

<sup>36</sup> 42 U.S.C.S. § 4332(C)

<sup>37</sup> MMPA Sec. 101(a)

<sup>38</sup> *Id.*; *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 602 (9th Cir. 2014) (explaining the best available scientific evidence to mean that the agency cannot ignore biological evidence which is readily available and "is in some way better than the evidence it relies on.")

specified activities to continue.<sup>39</sup> The scientific evidence the Service must consider includes the number of mammals likely to be incidentally “taken” over the period of five years.<sup>40</sup> Herein lies the first problem.

### **1. PROBLEM #1: THE FIVE-YEAR WINDOW**

This provision is premised on the erroneous assumption that if the project activities were to stop after the approved five years, the risk of harm is gone; it fails to consider the type of activities being conducted and that because of the particularized nature of these activities, harm is highly probable after those five years.<sup>41</sup>

The language of the Act limits the Service’s consideration of the likely impacts to those within the five-year window. Many of these permitted activities are comprised of multiple phases, each of which may vary in geographic location and over an extended period of time, but it is only the phase which occurs within the five-year period that is evaluated for its potential adverse impacts to marine mammals. This restricted amount of information that the Service is required to consider before approving a project means they ignore the reality of most industrial activity. The initial phase of a project is often just the first of many and it rarely illustrates the whole picture, thus making the Service’s evaluation an inaccurate representation of the impact a project will have on marine mammals.

Oil and gas exploration is a prime example of an activity with multiple phases; the resources are first extracted from beneath the earth’s surface and then they are transported—through internal-combustion engine vessels—to various locations where they are finally burned for energy.<sup>42</sup> While the transportation of these products and conversion of them to energy won’t

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<sup>39</sup> MMPA Sec. 101(a)(5)(A)(i)

<sup>40</sup> MMPA Sec. 101(a)(5)(A)(i)(I)

<sup>41</sup> The particular nature activities is discussed further under Problem #3.

<sup>42</sup> *Transportation*, ConocoPhillips Alaska, <https://alaska.conocophillips.com/what-we-do/transportation/>



cause significant direct harm to polar bears—the only type of harm that the current ITR provision requires to be considered—burning these products creates GHG emissions, further contributing to the increase in global temperature and melting of sea ice which does have a significant negative impact to polar bears as a species.<sup>43</sup> Unfortunately, since these impacts occur after the specified five-year period of the permit has ended they are not included in the impact assessment.

## 2. PROBLEM #2: LIMITED GEOGRAPHIC AREA CONSIDERED

The second problem is considerably intertwined with the first. The requirement that applicants define the “specified geographical region,” where their intended activities will occur severely limits the amount of protection the MMPA can provide.<sup>44</sup> Currently, the Service makes a determination about whether proposed activities within the specified geographic boundaries are likely to cause direct physical harm to marine mammals nearby, such as by loud noise, vibrations, or other physical causes.<sup>45</sup> In this evaluation, the Service does not have to evaluate the likely indirect impacts that will occur in the future even though proposed activities may be one of the causes. Oil and gas activities fall into this category of activities that may in fact have minimal direct impacts on animals near the physical drilling sites, a point that the Ninth Circuit included in their discussion in a case involving an alleged MMPA violation,

the administrative record tends to show that the oil and gas industry has little impact on polar bears. Not one polar bear death associated with Industry has occurred during the period covered by incidental take regulations.<sup>46</sup>

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<sup>43</sup> *Causes and Effects of Climate Change*, United Nations, <https://www.un.org/en/climatechange/science/causes-effects-climate-change#:~:text=Fossil%20fuels%20%E2%80%93%20coal%2C%20oil%20and,they%20trap%20the%20sun's%20heat>.

<sup>44</sup> MMPA Sec. 101(a)(5)(A)(i)

<sup>45</sup> See *Ctr. For Biological Diversity v. Kempthorne*, 588 F.3d 701, 706 (9th Cir. 2009) (“It is unlikely that oil and gas activities will physically obstruct or impede polar bear movement.”).

<sup>46</sup> *Id.* at 712

The court defers to the administrative record and does not explore the plaintiff's argument that the Service's evaluation failed to make the connection between the recognized impact of climate change on polar bears and the "multiplying effects of oil and gas activities"<sup>47</sup> likely because the law simply requires the Service to examine the impacts of the activities solely within the specified activity location, which leads to the third problem with the MMPA.

### **3. PROBLEM #3: FAILURE TO CONSIDER THE NATURE OF PROPOSED ACTIVITIES**

The third problem is that the law does not require the government agency (the Service in this instance) to evaluate the particular nature of the proposed activities to determine whether there is a high likelihood of prolonged impacts to the marine mammals at risk.<sup>48</sup> As discussed above with respect to the first two problems, it fails to acknowledge that certain activities may cause indirect harm outside of the five-year permitted period and outside the specified geographic location. Those kinds of activities should be more closely examined.

For example, Alaska has been a popular area for drilling projects due to the availability of underground resources. On appeal from the U.S. District Court for the District of Alaska, the Ninth Circuit discussed an alleged violation of the MMPA in a case involving gas and oil exploration.<sup>49</sup> In the background section of the opinion, the court acknowledged that,

[p]olar bears are vulnerable to climate change. Acute threats posed by a warming climate include the loss of sea ice habitat; reduction in available prey such as ringed seals; and increased energetic needs...for...traveling and swimming longer distances due to reduced ice pack.<sup>50</sup>

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<sup>47</sup> *Id.* at 711.

<sup>48</sup> See MMPA Sec. 101(a)

<sup>49</sup> See *Kemphorne*, 588 F.3d at 701.

<sup>50</sup> *Kemphorne*, 588 F.3d at 705.

Despite this recognition, they subsequently contradict it when they accept the Service’s evaluation of oil and gas activity impacts on polar bears.<sup>51</sup>

With respect to bears, [the Service] found that past interaction has been “minimal.” Most industry activity is conducted on land, away from the ice floes that polar bears prefer.<sup>52</sup>

The court first says the ice is melting but follows that conclusion by deferring to—and not challenging—the Service’s evaluation that since polar bears prefer being on the ice, industrial activity will hardly affect the bears because the activity occurs on land.<sup>53</sup> The court continued,

The EA [environmental assessment] acknowledged that climate change could affect the degree of impact on polar bears, but resolved that the magnitude of this effect was unclear.<sup>54</sup>

There is a clear and direct correlation between oil and gas activities—particularly the burning of them for energy—and the impact it has on polar bears. These activities emit GHGs, which increases the global temperature, melts sea ice—the habitat required for polar bears’ survival—<sup>55</sup> and yet the court did not challenge this evaluation. The court remained laser-focused on the direct impacts within the physical location and short time period of the permit for the proposed activities even though the significant impact of the activities would occur outside both of those constraints, thus nullifying the protection the MMPA was established to provide. If the law required the Service to include the nature of the proposed activities in its consideration, there would be very different results.

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<sup>51</sup> *Kemphorne*, 588 F.3d at 706

<sup>52</sup> *Id.*

<sup>53</sup> *Id.* See also, BiOp, at 88. (“Polar bears in the SBS subpopulation have also increasingly used land for maternal denning...the frequency of land denning was directly related to the distance that sea ice retreated from the coast.” [Data published in 2018])

<sup>54</sup> *Kemphorne*, 588 F.3d at 706.

<sup>55</sup> *Supra* notes 11, 12, 13, 14.

### C. THE TIED HANDS OF COURTS, OR ARE THEY?

Courts often become involved when a conservation group believes the Service violated a wildlife or environmental protection law by authorizing one of these take permits. Per the Administrative Procedure Act (“APA”), a court must give deference to the federal agency with respect to their actions and can only overrule an agency’s action if the court finds that it was arbitrary and capricious.<sup>56</sup> Since courts generally don’t have specialized knowledge in niche areas of law, deference to federal agencies is logical as they are inherently specific in what activities they oversee and what laws they enforce. However, this system is far from perfect and judicial review is a necessary safety net, but even this cannot fix the overarching problem when the law prevents the court from making the best decision.

The Ninth Circuit continued to display its inclination to quickly defer to the Service through their reasoning of polar bears’ preference to exist on ice in an attempt to demonstrate why these industrial activities are unlikely to cause significant harm to the polar bear population.

[M]ost encounters are only short-term behavioral disturbances. It is unlikely that oil and gas activities will physically obstruct or impede polar bear movement. Since 1993, there have been no bears killed by industrial activities. Nevertheless, from 1993 to 2004, there were more than 700 sightings of polar bears related to industrial activities. More recently, sightings have increased.<sup>57</sup>

The court does not discuss possible reasons for the increased number of bear sightings, including the very likely reason that the bears are being forced to stay on land because GHG emissions from these activities including the use of oil and gas are melting the sea ice. The court overlooks the well-documented effects of the oil and gas industry—that it is a massive contributor to the increase in global temperature.<sup>58</sup> It should not require the specialty of a federal

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<sup>56</sup> *City of Sausalito v. O’Neill*, 386 F.3d 1186, 1206 (9th Cir. 2004).

<sup>57</sup> *Kempthorne*, 588 F.3d at 706.

<sup>58</sup> *Greenhouse Gas Emissions*, supra note 8.

agency to draw the connection from the oil and gas emissions to the increasing global temperature and the decreasing sea ice.

In *Kemphorne*, the plaintiffs argued that the Service’s conclusion that the proposed oil and gas activities would have a negligible impact on polar bears was arbitrary and capricious. They argued that the Service “failed to consider the combined effects of oil and gas operations on the weakened physical fitness of polar bears due to climate change.”<sup>59</sup> The government alleged that the Service *did* consider the polar bears’ weakened status as a result of climate change when analyzing the likely effect of industrial activities on “species within the geographic region.”<sup>60</sup> As a rule, a court should only hold a finding of negligible impact to be arbitrary and capricious under the MMPA if the agency “entirely failed to consider an important aspect of the problem.”<sup>61</sup> Here, the court said they did not need to “determine whether the Service actually analyzed the effects of weakened physical fitness of bears, as the relationship between such fitness and industrial activities was speculative.”<sup>62</sup> For reasons discussed above, this reasoning is flawed.

The court continued to discuss “disturbance impacts” from industrial activities and how it might affect denning females if the activity noise was close to the dens but how “[b]ears may even acclimate to such noises.”<sup>63</sup> The court only refers to the physical and audible characteristics of activities and how they may affect polar bears in the same area as the facilities and operations. The speculative connection they refer to is also based on the physical disturbance that may result; if the activities’ impacts on climate change were allowed into consideration, the

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<sup>59</sup> *Kemphorne*, 588 F.3d at 710.

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

<sup>63</sup> *Id.* at 711.

connection between physical fitness of polar bears and such activities would be far less speculative.

It is not for a lack of awareness that the court fails to draw the connection from climate change to the harm being done to the polar bear population, but the lack of an adequate law which allows for the evaluation of the type of activities being conducted and how they cause such significant harm. If the law were better constructed, the evaluation of these activities would likely not even reach the courts because it would give the Service the ability to conduct a more thorough analysis of how activities like oil and gas drilling impact marine mammals over a longer period of time and thus conclude that they must deny permits for such activities in the first place.

As the law stands now, courts appear to have had no choice but to give great deference to the Service and conclude that the Service acted reasonably in approving take permits based on evidence that only negligible impacts were likely to occur within the specified five-year period; the court could overturn it only if they found the Service's conclusion arbitrary and capricious.<sup>64</sup> The court cannot make any broader rulings about the potential and likely impacts that could occur after five years as a result of the GHG producing nature of such activities; their hands are tied by the APA requirement of giving deference to agency action and the agency (here, the Service) is not currently required examine the type of activities in its evaluation of the impacts on marine mammals.

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<sup>64</sup> *City of Sausalito*, 386 F.3d at 1206.

### III. POSSIBLE SOLUTIONS

Problems should be resolved as they arise, but many problems go unaddressed for too long, especially in the field of law. The law is constantly being amended to fit present conditions, as it should. Laws need to be modified when they no longer fulfill their original purpose.

The MMPA provisions that allow for incidental takes of marine mammals as discussed above should be amended so that those mammals actually receive adequate protection. Section 101(5)(A)(i) of the MMPA contains the first problematic phrase, “within a specified geographical region.”<sup>65</sup> Applicants specify the location where their proposed activities will take place and within these boundaries is where the Service will assess what type of harm marine mammals who are nearby may suffer.<sup>66</sup> While the physical activities should continue to be examined for their potential direct harm to marine mammals, this should not be the only consideration. By adding a sub-section that broadens the geographic scope if the nature of the activity being proposed is known to have long-term effects outside the specified geographic area it would make the Service’s evaluation of impact risk much more accurate.

For proposed activities of this nature, there should also be an additional inquiry about the predicted amount of resources likely to be extracted as well as the overall duration of the project. The amount of available oil and gas in a particular geographic region is usually predictable and thus, the amount of GHG emissions likely to be produced can be estimated.<sup>67</sup> As discussed above, there is a direct correlation between quantity of emissions and the amount of sea ice lost; this data should be accounted for in the Service’s analyses before approving incidental take

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<sup>65</sup> MMPA Sec. 101(a)(5)(A)(i)

<sup>66</sup> *Id.*

<sup>67</sup> See *Alaska State Profile and Energy Estimates*, U.S. Energy Information Administration, <https://www.eia.gov/state/analysis.php?sid=AK>

permits. Melting sea ice is a destruction of the polar bears' habitat, habitat that the MMPA is supposed to protect, and this addition would provide such protection.

Section 101(5)(A)(i)(I) says that the Service must look at the five-year period to determine if the impact on marine mammal species will be negligible “and [] not have an unmitigable adverse impact on the availability of such species.”<sup>68</sup> This should be amended in a similar manner to the above recommendation to add a provision that if the proposed activities are those known to produce large quantities GHG emissions, that the predicted impact on species should not be limited to a five-year span. A specified duration should not need to be included when the activities are similar to oil and gas exploration, or at the very least, a duration looking fifty years in the future to see the projections of global temperature increase and sea ice melt would be an improvement. Since these kinds of activities contribute to the already increasing global temperature and since climate change has been clearly established to be the primary threat to polar bears, the causal connection between these activities and the known harm to these marine mammals is far from attenuated.<sup>69</sup>

Any change in the law that creates additional environmental protection will inevitably have a negative reaction from proponents of gas and oil exploration as it would reduce the amount of resources the oil and gas industry could extract. Anything that creates an obstacle in the path of profits will be met with extreme opposition, even if in the name of keeping this planet livable for the humans responsible for its destruction.

Opponents of these amendments may argue that these oil and gas activities in the Arctic (the extraction of which would require them to adhere to the procedures of the MMPA) contribute so few emissions compared to all of the other GHG emitters that reducing their

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<sup>68</sup> MMPA Sec. 101(a)(5)(A)(i)(I)

<sup>69</sup> (Particularly with respect to destruction of wildlife habitat: sea ice.)



activities would have little, if any, positive effect. This argument is weak. The Supreme Court of the United States rejected this argument in *Massachusetts v. EPA*.<sup>70</sup> In response to the EPA's argument that "its decision not to regulate greenhouse gas emissions from new motor vehicles contributes so insignificantly to petitioners' injuries that the Agency cannot be haled into federal court to answer for them," Justice Stevens said,

EPA overstates its case. Its argument rests on the erroneous assumption that a small incremental step, because it is incremental, can never be attacked in a federal judicial forum. Yet accepting that premise would doom most challenges to regulatory action. Agencies, like legislatures, do not generally resolve massive problems in one fell regulatory swoop.<sup>71</sup>

Accordingly, even though these Arctic activities may be relatively small contributors when compared to the overall emitters in the world, any small step in the direction of positive change is undoubtedly worth making.

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<sup>70</sup> *Massachusetts v. EPA*, 549 U.S. 497 (2007).

<sup>71</sup> *Id.* at 523-24.